



ARE YOUR ATHLETES SUBJECT TO TAPE IRRITATION?

Then Use New Bike Web Formula 87 Trainers Tape



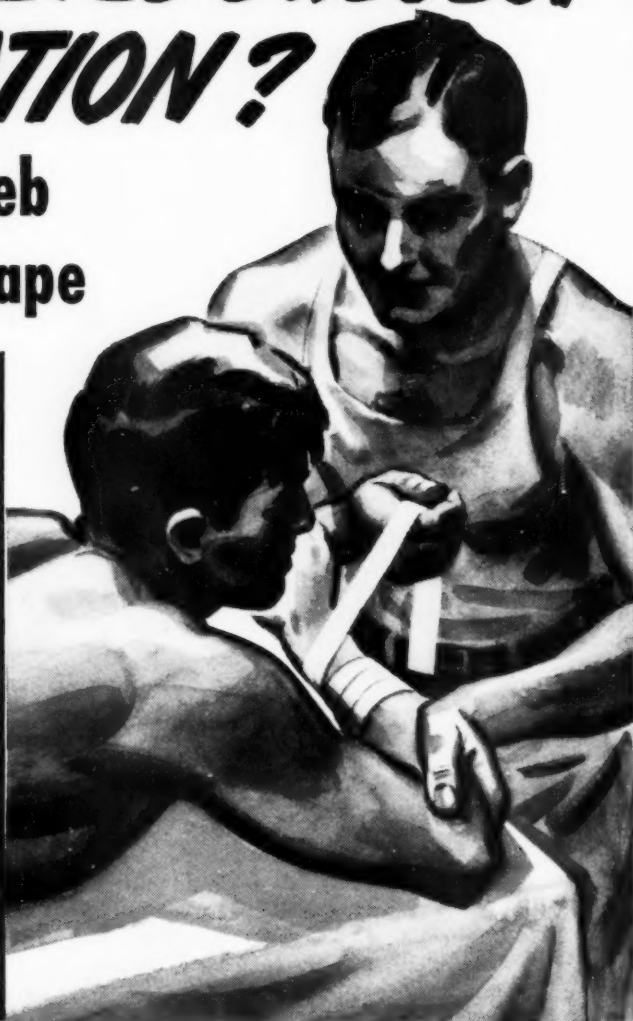
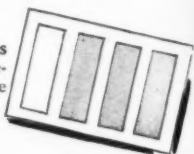
LESS ALLERGIC: Scientific patch tests made by independent dermatologists show Formula 87 fifty per cent better than the nearest competing brand tested, in reducing the occurrence of painful inflammation due to irritation from adhesive.

LESS CREEP: Laboratory tests show that Formula 87 not only gives a minimum of creep when fresh, but maintains this quality even when aged.



MINIMUM DETERIORATION: Formula 87 is a long life tape. Its deterioration due to extremes of heat and cold or other atmospheric conditions is extremely slow. In this it is outstanding.

PURE WHITE: Formula 87 is the only adhesive mass pure white in color. It is white because of its freedom from many of the impurities which may cause irritation.



New Bike Web Trainers Tape cuts down allergy and has less creep and deterioration with age

FORMULA 87 brings to coaches and trainers an adhesive far better than any previously obtainable. Its development represents the most important improvement in adhesive for athletic use in many years—an improvement reached only after intensive research and scientific study. This has resulted in a new pure white adhesive which not only will adhere immediately and hold firmly but also gives you new exclusive features!

Tests show that a high percentage of athletes are susceptible to irritation from adhesive—many seriously so. Formula 87, through the elimination of ingredients found to be positive irritants and the use of a more pure rubber, so far reduces this irritation that in patch tests made at a lead-

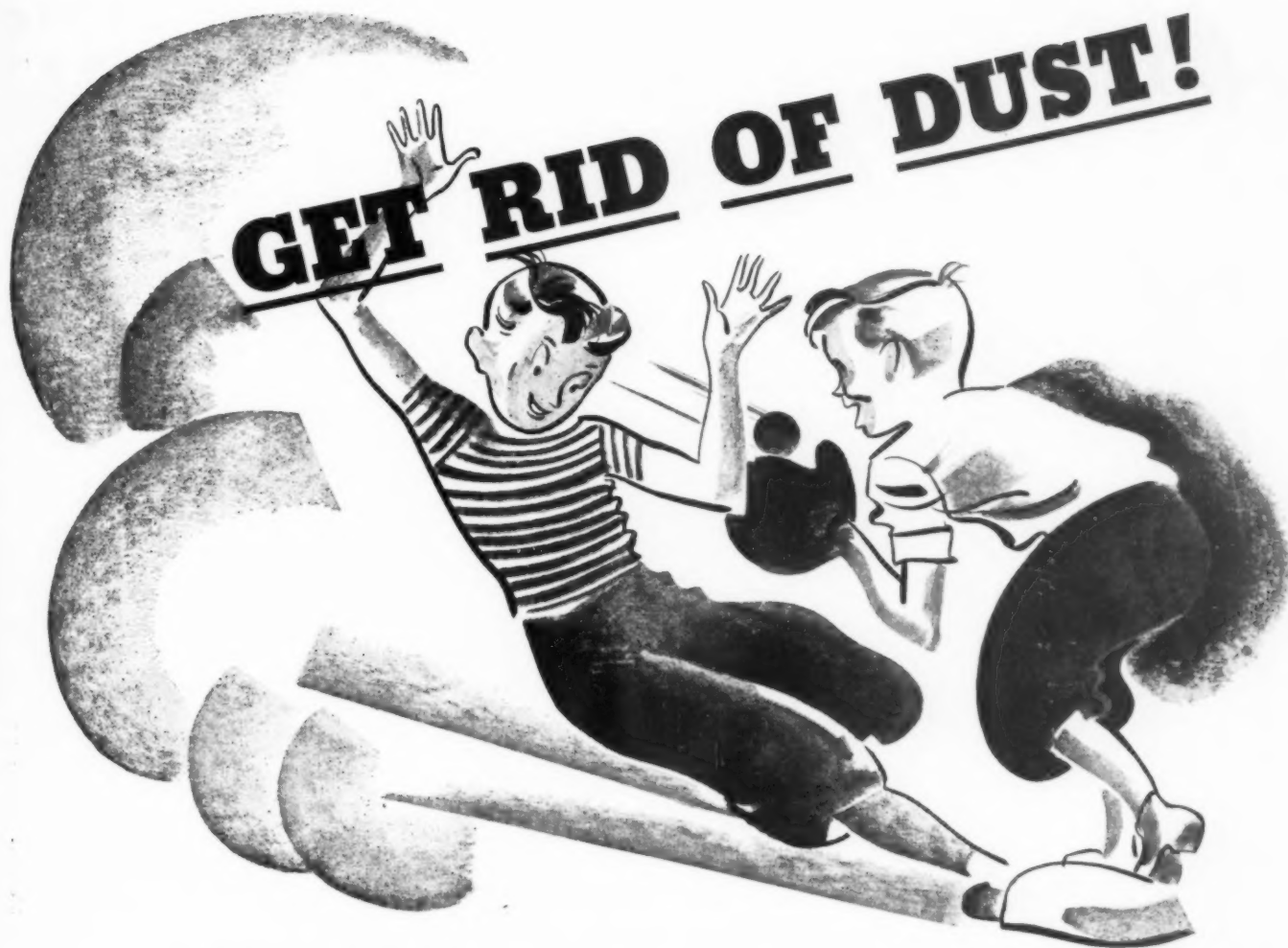
ing mid-western medical school it was shown to be 50% less irritating than the nearest competing brand tested!

And that's not all! Not only does Formula 87 reduce irritation but this new adhesive resists deterioration with age—reduces creep—and retains its tackiness over long periods of time.

Every coach and trainer wants the best supplies for his athletes—every coach and trainer will want Formula 87 adhesive tape! Get in touch with your dealer—ask him about Bike Tape Formula 87. Try it and see for yourself what a difference this new tape makes.

Bike Formula 87 Trainers Tape comes in 10 yds. x 12 inches assorted cuts, 5 yds. x 12 inches uncut.





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Nimble-footed, these athletes and teams that stand out well above competition! Chances are you'll find them wearing shoes of Genuine Kangaroo. Most winners do. The reasons are obvious.

Footwear of Genuine Kangaroo is the acknowledged footwear of Champions. It means absolute foot-freedom; a leather 17% stronger, weight for weight, than any other leather; one that is not only tough but 14% lighter at any given strength, is well-and-away a first essential of the correctly outfitted athlete.

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SCHOLASTIC COACH

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Editors: OWEN REED and JACK LIPPERT
Assistant Editor: H. L. MASIN

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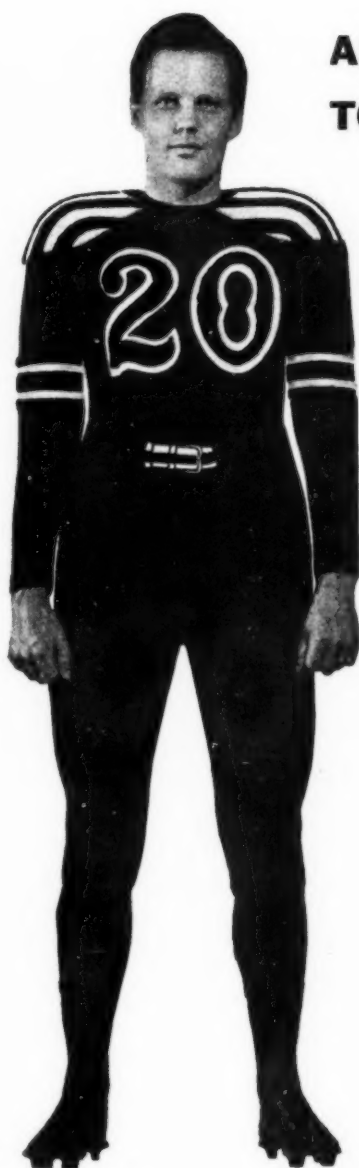


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These O'Shea matched units are a logical development of modern football. Compare the fine designing and tailoring with others and note the superior quality and excellent craftsmanship. Compare the prices and prove to yourself how the O'Shea quality line is priced to meet all school budgets.



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Start Your Boys on This Nourishing Breakfast So Many Great Champions Eat. It's a Winner for Flavor and Food Value!

You know two very important reasons why the young athletes in your charge need a good, nourishing breakfast every morning.

It helps them keep in top condition for active competition right now. And it helps build sound, sturdy bodies that growing boys should have in years to come.

Here's a national champion breakfast designed to handle both jobs the way you want them done—this "Breakfast of Champions," a generous bowlful of crunchy, toasted Wheaties flakes with plenty of milk or cream and fruit.

For winning flavor and keen satisfaction this famous breakfast is the choice of probably more great athletes than any other dish of its kind! And for solid nourishment your boys need every day, it's a champion that belongs in the morning line-up!

Here's a Well-Rounded "Team" of Nourishing Foods!

You see, this "Breakfast of Champions" is a combination of three basic foods athletes can use in good amounts daily—whole wheat, milk and fruit. Each is a recognized champion for food value. Together, they make a complete breakfast that's nourishing and satisfying.

Your bowlful of Wheaties gives you abundant food-energy—the "food-fuel" that's the largest single need

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Fruit gives you other valuable minerals. And your complete "Breakfast of Champions" delivers Vitamin A, essential to normal growth, the appetite and growth promoting Vitamin B, and Vitamin C, needed daily to help maintain good condition.

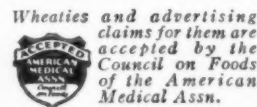
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You know the excellent nourishing qualities of whole wheat, but that refreshing Wheaties flavor may come as a distinct and pleasant surprise.

Here is whole wheat in a form that clicks with hearty appetites! Big, crisp flakes with a zippy, malted taste that makes Wheaties the number one favorite of millions!

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WHEATIES

WITH MILK OR CREAM AND FRUIT

"Breakfast of Champions"

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AFTER all the tub thumping that preceded the Loyola University (Chicago) basketball team on its way to the national invitation tournament at Madison Square Garden last month, it's hard to tell whether the near record crowd of over 18,000 turned out in expectation of seeing a basketball game or a return engagement of Frank Buck's Gargantua. For days before Loyola's game with St. John's (N. Y.), the local papers had been feeding the public stories about a pre-historic monster who toiled in the mole-skins of Loyola. So on the day of the game, you can hardly blame the basketball fans in the city for turning out en masse. The ballyhoo even got us. If it were not for the fact that we get free tickets, we honestly believe that we would have paid our way in.

The innocent object of all these attentions was Loyola's 6 ft. 9 in., 220 pound center, Mike Novak. Not only was Mike touted to be the tallest college player extant, but he was supposed to be a phenomenal play maker. As shrewd a judge of men as Nat Holman called him the greatest college center he had ever seen. And if anybody ought to know it's Nat. His College of the City of New York team had taken a 25-point beating from Loyola earlier in the season.

So, amidst an almost carnival atmosphere, the Chicago spire was formally unveiled in the Garden. The party was a huge success. Before the night was out, Mike was a public hero and already there was talk of taking down the trylon at the city's world fair ground and putting up Mike instead.

There is no question that Mike is a tremendously effective player, but he certainly has a strange way of playing the game. Because he has little stamina, he seems to be standing still practically all of the time. On defense, he plays goal tender. While his four teammates rush around busily in a four-man zone, Mike parks under the basket, practically brushing the cords off his head to do so, and watches the game almost disinterestedly, sometimes with his hands on his hips. At these moments he is about as useful to the team as Shirley Temple.

But once an opponent takes a shot from the field, Mike springs into action. As the ball starts curling over the rim, the big boy leaps off the floor and spears the ball before it clears

Here Below

Basketball Bows Out



HUMAN SKYSCRAPER: Action shot during the Loyola-St. John's game at Madison Square Garden last month. The picture shows Mike Novak, Loyola's 6 ft. 9 in., 220 pound center, coming down after spearing a field goal attempt in mid-air. What a man to have around!

the rim! The first time he did it against St. John's the house went into an uproar. When he repeated the performance about nine more times during the game, he practically demoralized the opposition. We're not willing to swear that this is basketball, but we haven't seen a defense to beat it. Incidentally, Mike never leaves this position on defense. He never goes out, even on the simplest of switches.

Once in a while Mike gets careless and lets a ball go by him that he might have speared. When he starts bogging down like this, his teammates urge him to get off the ground with exhortations like, "Up, Mike, Up!" or three brisk "Mike, Mike,

Mike's." Mike will then go back to plucking basketballs out of the air.

Loyola's offense is a lot like its defense; that is, it consists of four men and Mike. While the quartet forms a semi-circle in the backcourt and pass the ball among themselves very deliberately, Novak stands under the basket on either side of the free-throw lane and plays the bucket. He keeps moving from one side of the lane to the other, as the ball moves. His teammates keep watching him with

one eye until the time is ripe for a pass. The ball is then whipped in to him, and the attack really gets underway. Mike may pass right out again, feed a cutter and screen or turn and lay up a shot himself. He is deadly with this one-hand pivot shot. Against St. John's he dropped in six of these shots and made two other baskets on short pitch shots. With eight baskets and four fouls to his credit, Mike put in a real busy evening.

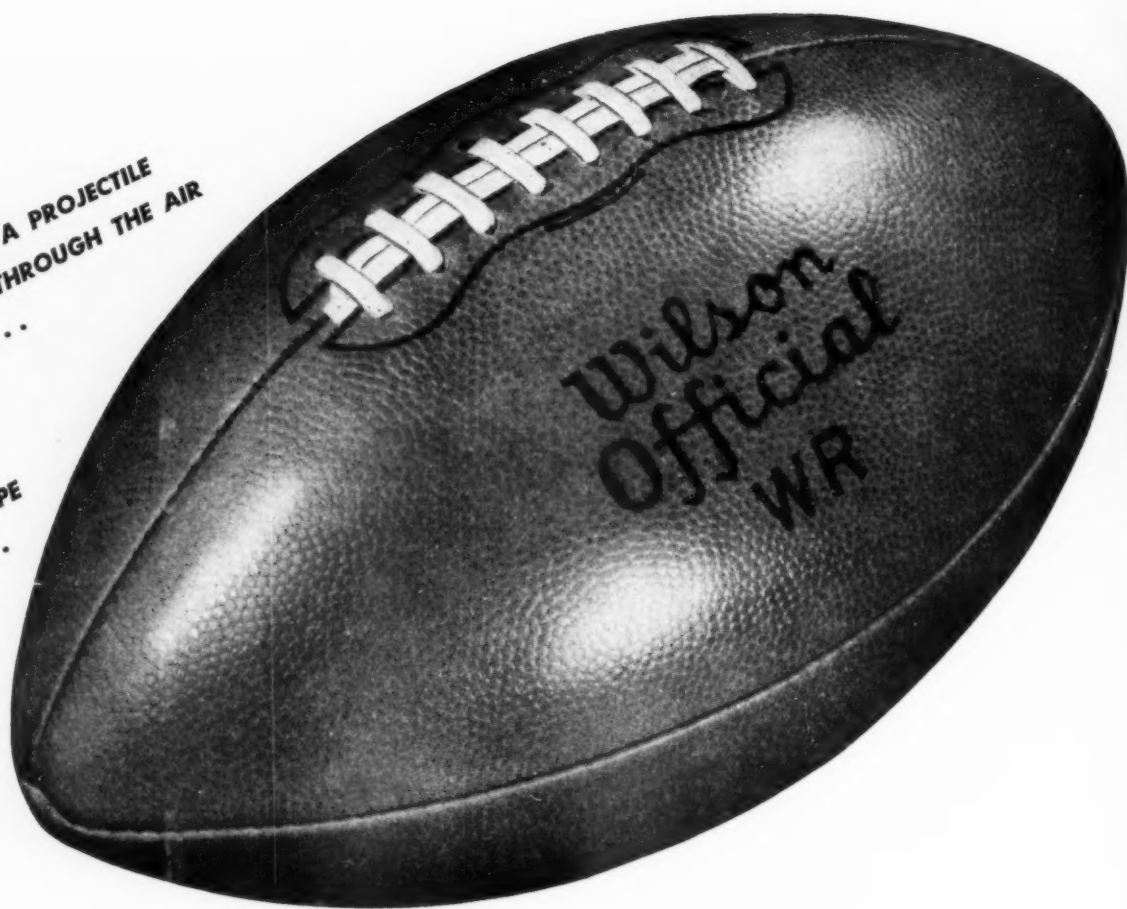
While Loyola was resting up for the championship game against Long Island University two nights later, Mike was a hero and had his picture in all the papers. But a player's lot is not always a happy one. Mike met his Waterloo in the finals.

His downfall was cleverly contrived by Coach Clair Bee of L. I. U. The New York team, sharpshooters all, moved the ball around very rapidly, and with only four men to go out after them, had all the time in the world to get set on their shots. From the very beginning, L. I. U. started raining basketballs into the hoop. Mike couldn't do anything to stop them because the L. I. U. shooters were deliberately banking all their shots! And it takes a seven and a half footer to shove an arm in the way of these shots.

Defensively, the game might well have served as an object lesson to all coaches on how to play a pivot man. Against St. John's, Novak was guarded by a player who stood directly behind him and let him take all passes. The L. I. U. center, however, seldom gave him the opportunity to be a ball-handler. He played heavy to either side of Mike, depending on the position of the ball, and always had one arm out to deflect passes. We never saw so many deflected passes in our life. Alas, poor Michael, the evening must have been a nightmare. He scored only one point.

IT'S SHAPED LIKE A PROJECTILE
TO SPIRAL THROUGH THE AIR
ON A PASS . . .

HAS THE NEW-TYPE
TRIPLE LINING . . .



. . . THE NEW LEATHER
GIVES AMAZING FINGER HOLD . . .
. . . NO SKIDDING . . . IT'S GREAT!!

WHAT IS IT THAT MAKES THIS NEW WILSON FOOTBALL THE NEWS OF THE SEASON?

● First, a new and amazing leather with a marvelous *feel* in the hand. The fingers of the "passer" get perfect traction—like a new tire on a good pavement. The grip is *velvety*, yet it's *firm*. No slipping. No uncertainty. This means greater confidence—accuracy—distance in forward passing. It means better centering and ball handling.

Note the improved streamlined "projectile" shape. It's a decided advantage. Easier to hold. Knifes through the air with less deviation. The thin, flush, eight-hole lacing aids gripping without throwing the ball out of balance. Craftsmanship throughout is the finest, including the new-type Triple Lining.

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Wilson
FOOTBALL EQUIPMENT

IT'S WILSON TODAY IN SPORTS EQUIPMENT



With a runner on first the umpire assumes a position which enables him to cover the pitch, watch the runner and to break quickly for second



in the event of a steal. If the runner goes down, the umpire pivots and runs with a good forward lean on a line to the left of second base.

CALLING 'EM FROM THE PITCHER'S BOX

James L. Quigley

All the fire and hustle James L. Quigley used to put into his catching as a college and later a semi-professional player, is now a part of his equipment as a baseball umpire. In New York City, he is considered one of the finest arbiters in scholastic and semi-pro circles. When he isn't calling balls and strikes, he divides his time as a physical education instructor between the Savage School (College) of Physical Education and the George Washington High School. Since most of the umpires in the New York area assume a position behind the pitcher when they are working alone, the author has devoted most of his article to this system of officiating.

BATTER UP! With these two words the trial of the "People versus Umpire Bill Jones" gets underway. The defendant is away from home, the jury biased, and the plaintiff's witnesses well trained in the art of rendering damaging evidence.

It looks like a sorrowful day for our friend Bill. But, surprisingly, the defendant is well poised, calm, cheerful and sure of himself. He makes a fine, well-groomed appearance in his navy blue suit, white shirt and four-in-hand tie. He is in good spirits for a man who is on the spot. And why not? He is confident that with his ability he can clear himself with any jury.

Let us see how he prepared himself for the trial ahead. First, he checked up on the entire playing area to see that (1) the backstop is clear of players and spectators, (2) bats and equipment are in their proper place and not in the path of base-runners, catcher, etc., (3) bases and home plate have no faulty straps, spikes or tears and are in their correct positions, (4) the outline of the batter's box is visible, (5) the home plate is clean, (6) both coaches are thoroughly in accord on ground rules

and length of the game, and (7) the scorer has the line-ups of both teams.

While he was carrying out these chores, he observed the warm-up of the starting pitchers. His position behind the mound is governed by the pitcher's style of delivery, and it is helpful to determine in advance what kind of throwers he will have to work behind. The overhand, side-arm, underhand and cross-fire types of deliveries call for different stances.

When all these preliminary duties have been discharged, the umpire is ready to start the game. He announces the batteries for the day's game and then takes his stance behind the pitcher. While the home twirler is taking the usual five practice tosses, the umpire observes his motion and contact with the rubber to make certain the pitch is legal.*

He is now ready to bellow the time-honored initiatory cry of "Batter Up." From this point on, let us assume that you are the umpire who is going to call 'em from behind the pitcher. You have observed the pitcher during his warmup and have him well catalogued. He uses the orthodox overhand style of pitching. If he is a right-handed pitcher, station yourself about three feet in back of the rubber and slightly to the right of his throwing arm (about six to eight inches). The feet are astride, toe of the left foot pointed toward home plate, body facing third base, and hands clasped behind the back with the indicator in the palm of the right hand.

This is an ideal position from

*Prior to 1939 the pitcher had to stand with both feet on the rubber or with one foot in front of the rubber and the other on top, in order to deliver a legal pitch. This year the rule has been changed. The pitcher will now be permitted to have one foot on the rubber and the other in back of the slab.

which to study the catcher's signs. It is of incalculable value to know what the pitcher is throwing, especially when the play is going away from you or when the catcher is contemplating a pitchout to nail or pick-off a runner. Observe the position of the man in the batter's box. Is he tall or short? Does he crouch or stand up straight? This information is necessary to call balls and strikes correctly. Many arbiters are hoodwinked by tricky stances and false motions on the part of the batter.

As the pitcher winds up, see that he has proper contact with the rubber. When he pitches, lean forward. *Keep your eyes on the ball.* Now: Call the ball or strike so that there isn't any doubt in the mind of the pitcher, catcher or batter as to your decision. Give life to your gesture and voice. Make your decision clear and with self-assurance. You must radiate confidence. Use the right hand to indicate "strikes" and the left hand for "balls." Do not antagonize players and do not enter into any discussion. Your decisions are final. If you have made a mistake, do not apologize. The diamond is no place for a Caspar Milquetoast.

As the game runs its course, keep ahead of the play. In basketball it is questionable for an official to anticipate. But the same does not hold true in baseball. There is less chance of being crossed up in baseball. Therefore, know the game situations: outs, inning, type of batter, when to expect a bunt (sacrifice, squeeze or drag), when to expect a hit and run, when to expect a steal, etc. The speed of the baserunner, a poor throwing arm on the part of the catcher, a faulty pitching delivery, the score, inning and outs will all determine

when a team is more apt to run (steal) than to play for the run by hitting. The count on the batter also provides a good clue. Two balls and no strikes, three balls and one strike, and three balls and two strikes are the counts on which the runner will generally go down.

It is also wise to anticipate what will happen when the infield is playing in or well back. Watch the hitter as he runs towards first on a batted ball. He may be screened by the pitcher (legal); he may be bumped (interference); he may fail to touch the bag as he makes for second (keep silent unless the defensive team calls your attention to it); he may turn in or out (it is the intent that counts). In the event of an extra base hit, hustle so that you may get into position ahead of the play.

The only way to keep on top of the play is to anticipate it and then break fast to the center of action. At the same time, it is of utmost importance to keep out of the line of fire on all throws. For example, on the slow type of grounder, where the infielder is forced to come in for the play, fade to the outside out of line of the defensive man making the throw. On a hard hit grounder, break quickly to the inside. As long as you are sure of the ball being fair, do not concern yourself with the play at your back. Get the angle on the play at the bag, and focus attention (split vision) on the feet of the runner and the mitt of the first baseman. If you are unable to divide your attention in the prescribed manner, then glue your eyes on the runner's feet alone. Listen for the thud of the ball in the glove and judge whether the runner reached the bag before or after the thud.

Occasionally it pays to avoid a quick break towards the play. On slow hit balls to the left of the pitcher, with no one on base and with the



DANGER at the crossroads! Before giving the play-ball sign, the umpire should clear the base lines of spectators and players.



CORRECT body lean after a delivery by a southpaw pitcher. The lean insures the umpire of an unobstructed view of the whole pitch.

possibility of either the first baseman or the pitcher fielding the ball, instead of breaking for first immediately, hesitate, see how the play is developing and then hustle to a point of vantage. In this way you can avoid being drawn into any entanglements at first.

Slow, dribbling bunts along the baselines can also cause some trouble. This is especially true in regard to the catcher. While playing the ball on his throwing side (right), he is frequently in foul territory retrieving a fair ball. You must call the play quickly, either "fair" or "foul." The longer it takes you to make a decision, the more danger there is of becoming involved in an argument. This is also true of foul flies. It is important to fix the position of the ball in your mind first, then the position of the player in relation to the ball.

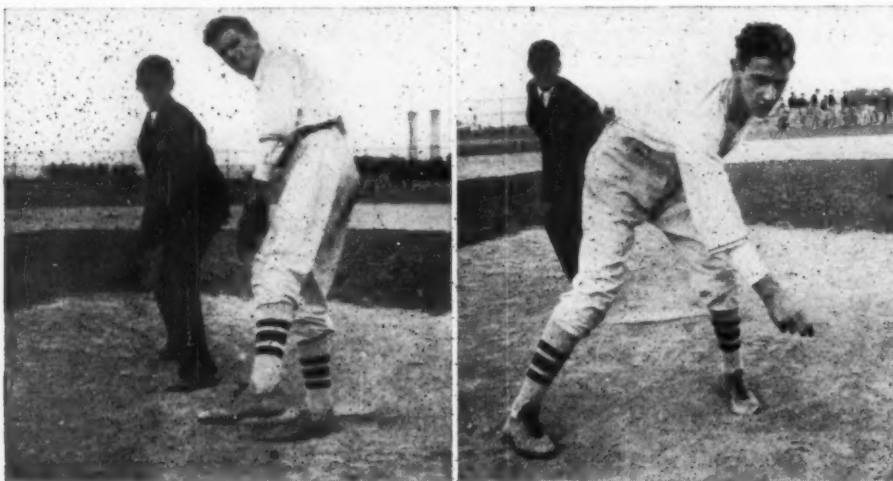
With men on bases keep your wits about you and get ready to cover lots of ground. Be on your toes. Don't be drawn out of position; when in doubt, cover the play nearer home.

With a man on first, assume the same stance but instead of facing third base turn so that you face first. In this position, you can watch the action of the runner as well as the pitch. It is an excellent position from which to break towards second to pick up the play on a steal.

If the base runner elects to go down on the pitch, do not wait to call the ball or strike, merely use the indicator, wheel quickly, and run with a good forward lean on a line to the left of second base. If the runner hits the dirt feet first, the second baseman or shortstop must tag the feet. Many infielders make the mistake of tagging the runner's body while the latter's feet are already in contact with the bag. The same holds true with the runner coming into the bag head first. Follow the hand in this case. Above all, clear out of the line of the catcher's throw.

With runners on first and second, second and third, or bases full, revert to the original position. By merely looking over the right shoulder, a complete view may be had of the line of possible action. In calling plays at home, see that you have the proper angle. Don't be screened out. From your position in back of the rubber, cut left on an oblique line to the plate. Don't be intimidated. Call the play as you see it. If the throw to home is via first, second or right field, make sure to get out of the way of a possible relay.

Perhaps the most important consideration of the umpire outside of calling 'em is to keep the game moving. Always have an adequate supply of balls in your possession; three is usually enough. Do not use a ball that is badly scuffed. Your first concern is the protection of the players, and it is well to remember that "a ball with a tail is apt to sail." In the late innings, try to use balls that are



VISIBILITY EXCELLENT: When an umpire is working behind a right-handed pitcher, he should station himself about three feet in back of the rubber and slightly to the right of the throwing arm. He watches the flight of the ball from over his left shoulder and leans forward with the pitch.

not stained or dark. Discourage the managers from throwing balls to you while working behind the pitcher. This is very disconcerting and a source of danger both to you and the pitcher. Occasional words to the batters to be ready, etc., may also help to speed up the game.

Following the retiring of the side, contact the scorers immediately to check on the runs scored. Clean the home plate (which should be kept clean at all times) and the position of the bases. Announce any replacements for the next inning, or in the case of a pinch hitter, during the inning. Replenish your supply of balls, if necessary.

So far the discussion has been devoted exclusively to the duties of an umpire who stands behind the pitcher. Most high school coaches prefer to have him work from that position because of the prevalence of high scoring games. They feel that he is in better position for plays on the base paths and that he can call balls and strikes just as well as from behind the catcher. In some ways it is actually advantageous to call balls and strikes from behind the pitcher. In this position he is not as prone to overlook the knee-high ball to the outside corner, a troublemaker when working behind a well-built catcher.

Working behind the plate

However, much of the foregoing material is also applicable for an umpire working behind the plate. The following suggestions apply to this type of official; (1) purchase proper equipment, (2) station yourself in back of the catcher, not too close, since you may impede his freedom of movement, (3) bend slightly forward, an aid in calling low balls, and look over the catcher's left shoulder (for a right-handed batter), (4) don't be gun-shy, follow the ball all the way.

As the batsman dashes for first



STAY OUTSIDE when working behind a pitcher who utilizes an underhand or a cross-fire style of delivery. The lean after the pitch must now be in two directions—forward and out. If this clearance step is not taken, the umpire will find his view of the plate blocked out after every pitch.



base, wait until he takes his first step, then swing clear of the catcher and break for a position in the infield about halfway between the pitcher's box and first base. In the event that the runner goes to second, cut to your left and continue out to the play. With a runner on first or second, take a position behind the pitcher. With a runner on third, second and third, or bases full drop behind the catcher.

No matter where you are calling balls and strikes from, remember it is much better to be close up on a play and err, than to be 20 feet away making the boner. When an umpire is continually hustling and is always on top of the play, the player, whether the decision is right or wrong, always has a feeling that the umpire may be right after all; that because of his being "in there" he may have seen something the player may have missed.

A good arbiter never allows a talkative catcher to take the play away from him. He makes his own decisions on balls and strikes. At the same time the umpire should not be

swayed by a batter who drops away on a strike to the inside corner. Or the type of batter who starts for first on a pitch following a three and nothing count.

Several other suggestions follow:

1. Equip yourself with an indicator, a small whisk broom and a rule book.
2. Do not dress in the same room with the players.
3. Avoid contact with players before and after the game.
4. Know the rules and every type of knotty game situation.
5. Condition yourself for the season as any sensible player would.
6. Don't criticize the work of other officials or be a party to rate-cutting, fee-splitting or any other unethical practices.
7. Confirm working dates at least one week ahead of time.
8. Be prompt. Arrive at least 30 minutes before game time. This allows you time to dress and inspect the field.
9. If you can't "take it," give up the idea of officiating.



PLAYING FOR ONE: The prime consideration of the umpire on infield grounders is to hustle to a point where he can get a perfect angle on the play and still be completely out of the line of fire. The picture



on the left shows the correct position to take on a ball hit to the second basemen. On a grounder to the shortstop (right), the umpire must move into the baseline to get a perfect angle on the play at first.

William Watson

Michigan University

No. 1: Notice the slight flexion of the right leg, and the high lift of the left knee. The left arm is bent to facilitate body balance. Observe the desired angle between the right forearm and the trunk.

No. 2: The body weight is lowered, since the right knee has been bent in order to provide impetus to the shift across the circle. The left forearm is carried high to the front.

No. 3: As the left leg is swung moderately high to the front, the right leg is vigorously extended to include a push-off from the ball of the foot. Notice that the left elbow, the left hand and the shot are on the same plane.

No. 4: The left foot has barely contacted the toe-board but the final shove is about to be started. The right foot has been grounded in approximately the center of the circle. During the shift, the right shoulder has been drawn back, ready to apply power instantly. Many good shot putters, including Frank Ryan, Columbia's I. C. 4-A indoor champion, attempt to initiate the final shove just before the left foot touches the ground, a sort of rock-over movement.

No. 5 depicts the correct use of the trunk torque (twist) coupled with an upward-forward thrust of the right hip. The trunk is practically upright. Many athletes err by tilting the trunk forward. The foot spacing employed by Watson might be considered too close by some experts of form.

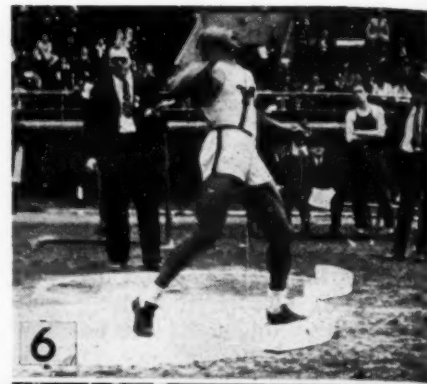
No. 6: The shot is carried well up in the fingers. The right hip has been brought sharply to the front, so that by quickly extending the right leg, the power of both the right leg and arm are applied simultaneously. The left arm, bent at the elbow, is whipped vigorously backward, thus aiding the forward movement of the right shoulder and arm.

No. 7: The trunk has been rotated squarely to the front. Observe that the shot resting on the finger tips permits full use of the wrist-snap and finger-flip which follows.

No. 8: The right arm is well extended, the right leg is started forward in the reverse and the left leg is drawn back. The head movement is farther to the left than the requirement of perfect form. In Nos. 5, 6, 7, 8, the path of the shot forms an angle of 42° with the ground. This is considered the maximum angle permissible.

No. 9 illustrates the method of maintaining balance, the speedy backward swing of the left leg, and the forward swing of the right leg. The right arm demonstrates the follow-through.

No. 10: Fouling is prevented by quickly planting the right foot on the ground, flush against, or close to, the toe-board. Body balance is aided by a slight bend of the right knee, a high backward swing of the left leg, and the backward extension of the left arm.



THE SHOT PUT AND DISCUS THROW

By George T. Bresnahan

A knowledge of body mechanics and strength are the keynotes to success in these events

We seldom find George T. Bresnahan on a solo flight as an author. Usually the University of Iowa coach pairs up with W. W. Tuttle, associate professor of physiology at Iowa. This team gave the athletic book world "Track and Field Athletics," the most comprehensive text on the sport in the last decade, and also collaborated on numerous articles for various athletic periodicals. Their experiments with a modified discus for high school use were instrumental in the Rules Committee's decision this year to recognize the instrument as official for all high school competition.

Shot Put

THERE is a general agreement among coaches on the value of a thorough development of the musculature from the foot to the finger tips. Obviously the power developed by the leg, back and arm is misspent if the wrist and fingers are incapable of imparting this and additional impetus to the shot. The importance of rhythm, or coordination, in addition to strength, is well recognized.

Fundamental exercises for both the scholastic and the collegiate shot putter consist of: (1) Pistol starts (sprinting 15 yards), to develop speed; (2) Rope skipping, to acquire agility; (3) Running high jump, coordination; (4) Standing broad jump, spring; (5) Calisthenics, exercises designed to strengthen the legs and back; (6) Squeezing a tennis ball, to develop finger strength.

Conscientious athletes keep their event in mind over a twelve-month period, and not solely during the few months of the competitive season. Exercises similar to those suggested, plus additional ones devised by the athlete to suit his individual needs, can be incorporated into the daily routine. Once the athlete has attained fair physical condition, and is in readiness for actual putting of the shot, these fundamental exercises should not be omitted.

Practice missiles

The novice shot putter may be rightfully advised to start his practice with a shot of less weight than he will later use in competition. This means an 8-pound or a 10-pound missile for schoolboy beginners, and a 12-pound shot for college boys. As the finger-wrist musculature is strengthened, the shot may be carried farther out on the finger tips, until eventually the athlete is ready to heave the regulation weight.

Numerous competitors have gone

a step further, and have practiced with an over-weight sphere, 16 pounds for the high school youth, and 18 to 20 pounds for the collegiate performer. Athletes following this plan report that on returning to the use of the regulation implement, their performances improved because the regular shot felt light to them. To put it another way, they felt that they were masters of the metal sphere. However, in practicing with an over-weight shot, the athlete should bear in mind that the change in weight may necessitate a change in timing the successive body movements. Therefore he should be in readiness to make the proper adjustments.

Leg swing

While the initial stance (the position taken in the circle just prior to initiating the shift) is generally based on the personal whims of the athlete, there is a difference of opinion on the merits of the three types of leg swing. Some favor swinging the left leg forward and backward in front of the right leg, and others prefer swinging the left leg forward and backward to the rear of the left leg. Authorities on body mechanics tell us the most efficient left leg swing is backward and forward in line with the right leg.

The same experts pass along another recommendation in regard to the action of the left arm during the shift. To derive the maximum use out of the fully extended member, they advise the athlete to sweep it downward simultaneously with the swing of the left leg and then vigorously upward and forward as the shift is executed. They claim that the forward swing of the left arm adds impetus to the shift across the circle.

Regarding the distance covered in the shift, orthodox methods require the right foot to touch ground in the center of the circle, and the left foot to land 3 to 8 inches from the toeboard. The delivery of the shot is begun instantaneously.

Other coaches prefer a "rock-over" style. The right foot lands six inches to rear of the center. The left leg is carried high, and the propulsion of the shot is started before the left foot touches ground. This style of putting eliminates the possibility of any abrupt break in form, and allows for continuity of motion.

Some coaches instruct their athletes to rest the shot on the shoulder, close to the ear. Others recommend a carriage above the shoulder and well out from the ear. Success has been achieved with both styles. However, the main point to consider in executing the delivery, is leverage. The best marks are usually attained when the shot, at the instant the trunk is squared to the front, is six to eight inches away from the ear, above and slightly in front of the shoulder (see No. 6 in the progressive action strip of William Watson).

At one time, coaches felt that the "cross-fire" action of the right arm across the body was a desirable phase of putting. Therefore, a put in which the shot struck the ground to the left of a line drawn through the center of the circle indicated correct execution of the cross-fire. With the passing of years, ideas have changed so that coaches believe a put which strikes ground a few inches to the right of the center line (or on the center line) indicates a proper application of body mechanics.

The angle made by the path of the shot and the ground depends on both the height of the individual and the velocity of the missile, chiefly the latter. Velocity in turn is dependent upon the strength of the athlete. The less-gifted athlete will obtain better distance by refraining from great elevation, and aim at 37 degrees. The top rank performer may strive for a higher elevation, 41 or 42 degrees. Recent measurements, taken from motion picture studies of twelve champions, show an average elevation of 42 degrees, with a narrow range of deviation.

Discus Throw

Discus throwers differ chiefly in their method of turning the body before executing the delivery. The objective in either case is to attain maximum angular velocity consistent with poise in the delivery. The method adopted is dependent on the athlete's ability, even though the coach may have a decided preference. However, the wise coach fits the style to the athlete. During the 1938 season, two discus throwers of national prominence on the same team employed different forms, one the pivot-rotation and the other the jump-rotation form.

(Concluded on page 27)

BATTING—GRIP, STANCE AND SWING

By Ethan Allen

A light grip enables the batter to get plenty of wrist-action into his swing

During his 12-year stretch with six different major league clubs, Ethan Allen was considered one of the most gifted fly chasers in baseball. A streak in the outfield and on the base-paths, he also carried a punch at the plate, retiring from the game last year with a life-time average of .300. Since his retirement, the erudite Mr. Allen (he holds both B.S. and M.A. college degrees) has written a text, "Major League Baseball," and taken over a desk in the publicity department of the National Baseball League. His article on batting is reprinted from his book with special permission of the publishers—The Macmillan Co. (N. Y.).

BATTING, unlike other fundamentals of baseball, depends mainly on individual ability. A player usually is or isn't a good batter and, regardless of teaching, the condition is changed but little. This is evidenced by the fact many major league players compile their highest batting averages early in their careers.

It is possible that the selection of an improper bat or wrong position in the batting box may have a detrimental effect on the batting of a player but it is impossible to insist that a certain bat should be used or that the hands should be placed at a specific position on the bat. Nor can a player be told to stand near or far from the plate, in front or back of the batting box or with the feet close together or spread a certain way. These things must be determined by individual players in their execution of batting. In other words, each player must select a bat that feels good in his hands, then find the grip and stance that fits his natural ability.

All this is clearly illustrated in the accompanying pictures. For instance, Paul Waner and Lou Gehrig both use an end grip, but Waner stands to the rear and outside of the batting box with his feet together, and Gehrig employs a wide spread of the feet through the middle of the box. Melvin Ott and Cecil Travis are also distinct types, Ott using a modified choke grip and standing to the rear and inside of the batting box with the feet moderately spread and Travis employing a choke grip opposite the plate with the feet only slightly apart. All of these players are exceptional batters; but it is doubtful if the particular grip and stance employed by each have been developed or are not rather the result of applying natural ability.

There are, of course, a number of factors in batting, such as picking good balls to hit and watching the entire flight of the ball from the time

it leaves the pitcher's hand, that are obviously important to all players. In addition there are other points which have been determined by a study of the corresponding stages of batting as illustrated by Waner, Gehrig, Ott and Travis. These may be outlined as follows:

(1) **Stance.** A fairly erect stance is taken facing the plate with the hips and shoulders level and the weight equally distributed on the balls of the feet.

(2) **Hitting Position.** The weight is shifted to the rear foot, the body turned slightly inward toward the catcher and the bat brought gradually back with the arms away from the body as the ball is being pitched.

(4) **Step.** A moderate low step is taken toward the pitcher with the front foot during the ball's approach.

(5) **Swing.** The arms lag a trifle then bring the bat into the ball in front of the plate as the weight is transferred to the front foot.

(6) **Follow-Through.** A pivot is made away from the pitcher and the bat is permitted to continue by its own momentum to the rear of the body.

The third stage has been purposely omitted from the outline because it is an intermediate stage in batting. With the exception of Ott, picture number three could replace picture number two and the description would be adequate. Ott, you will note, lifts his front leg high instead of taking a low step toward the pitcher. The logical conclusion from the comparison of pictures, therefore, is that Waner, Gehrig and Travis represent conventional batting form and Ott unique. A comparison of other players confirms this observation.

There are other variations in batting. For instance, Joe DiMaggio swings from a flat-footed position, Earl Averill sweeps at the ball with stiff arm action and Joe Medwick pulls away from the plate. Perhaps these players as well as Ott could be better batters were they to use a more conventional foot and arm action, but in view of their major league records it would seem their styles, whatever they may be, are satisfactory. The point is they have developed methods of batting which conform to their natural ability, and an attempt to alter them would likely mean unnaturalness and less effectiveness in batting.

In selecting a bat it is important to consider length, weight and balance. These, of course, will vary according to the physical characteristics of a player. The majority of major league players favor a bat thirty-four to thirty-five inches in length and weighted approximately one ounce to the inch. These measurements seem to give the greatest balance and swinging effectiveness, so that it is logical to assume that most players should use these lengths and weights or modifications of them and not attempt to use longer or heavier bats. Many young players adopt the latter course thinking they will be able to drive the ball farther. This is true, granted they can control such a bat as well as a lighter one; but it is unlikely the average player can do this. As a consequence perfect timing is frequently impossible.

The grip

The bat is usually gripped at the end or several inches from the end with the hand of the forward arm resting nearer the handle of the bat. The former is commonly called an end grip and the latter a choke grip. A modification of the choke grip is frequently referred to as a modified choke grip. In this case the hand of the forward arm is about one or one and one-half inches from the end of the bat. In all grips it is advisable to have the hands together with the fingers around the bat so that the clenched fists point away from the body. The bat should rest lightly in the fingers toward the front of the hands. This keeps the gripping muscles relaxed and makes it possible to snap the wrists in hitting the ball. (The illustrations on page 32 show the end, choke and modified choke grips, respectively, as employed by a right-hand batter.)

The stance

A comfortable stance is important, one that makes the batter feel at ease regardless of the pitcher or the batting responsibility. This should be close enough to the plate to reach outside pitches. The stance with regard to the front and back of the box should also be considered, a position toward the front of the box being advisable when batting against pitchers who throw a great many sinking fast balls and slow breaking

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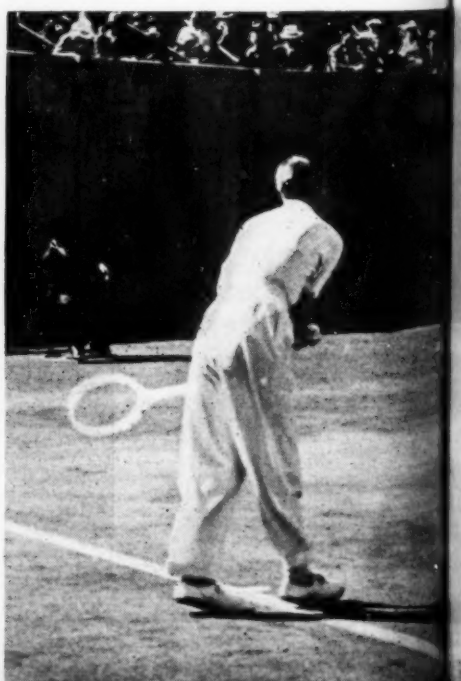
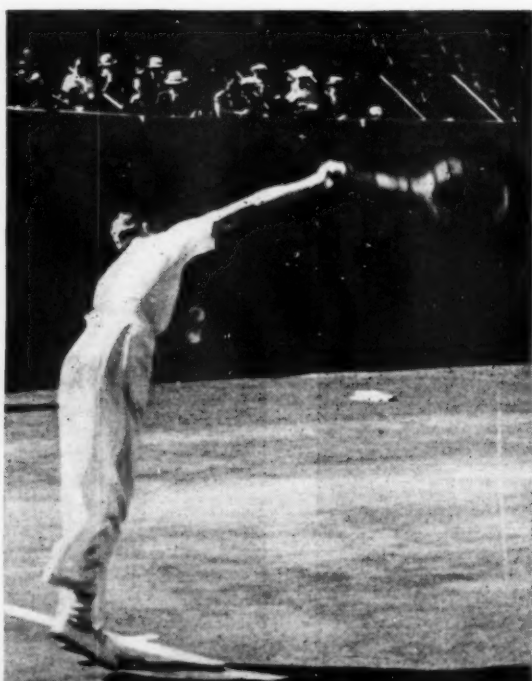
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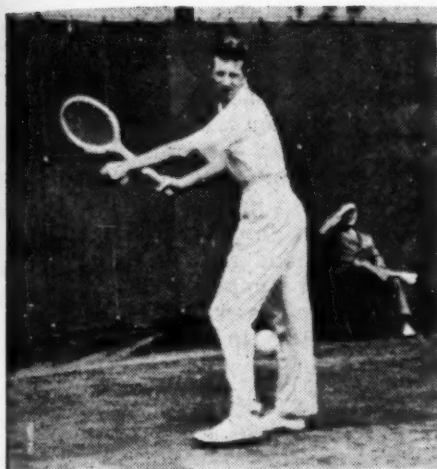
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A Perfect Service

Donald Budge's powerful service is graphically illustrated in this set of progressive action pictures, taken during the national singles championship at Forest Hills (N. Y.) last Fall. In the first picture, the ball has not yet been released. In the second picture, the release has been made and the weight is being shifted to the front foot. Very few players use such a complete backswing. Budge's racket describes a circle and a half before the ball is hit. In the fifth picture, the racket head has been dropped so far that the racket is almost perpendicular to the ground. All the weight has been shifted to the front foot and the body is being gathered behind the stroke. The sixth picture was taken a fraction of a second before the ball was met. The arm is fully extended but the wrist is still slightly behind the racket head. The wrist is whipping the racket head into the ball, adding the last bit of speed to the stroke. At the end of the stroke, the racket follows the ball far out before the wrist bends. The follow-through of the racket and arm is very complete.





FIRST THINGS IN TENNIS TEACHING

By Eugene Lambert

Eugene Lambert, former tennis coach at Kenyon College, now coaches the sport at the University of Arkansas. While at Kenyon, he handled Don McNeill, one of the country's most promising players, for two years.

FOOTBALL or even basketball can be learned reasonably well in a short span of two or three years, but a tennis player to be outstanding at 18 to 21 years of age must be started in the right direction at 12 or 13. There are many promising young players who will never reach the true heights of their game because they were not given sound advice and encouragement in the beginning. Their invariable remark when approached on strokes is, "I have never had anyone show me anything. I just picked up all I know."

It is the exception rather than the rule to find a high school or even a college coach who is able to instruct his players along technical lines. And yet the basic principles of stroke production are not especially difficult. There are so many reasonably priced instruction books available, that almost anyone who is willing to make a study of the game can do a pretty

fair job of coaching. The annual instruction books published by American Lawn Tennis contain so many authoritative articles and illustrations that any one of them alone would be sufficient for coaching purposes.

It is the writer's intention to show that it isn't necessary to be an expert player in order to impart sound advice to players of junior and high school age. The matter of equipment (rackets and balls) may be taken as a starting point. Even beginning players should be advised that it is impossible to make much progress

with a racket that has a warped frame and is silk strung. A substantial frame strung with gut is desirable. New balls may not be available all the time but they should be played with more often than once or twice a year. In many cases, cost is not the cause of a lack of good equipment; the players just don't know any better. In Austin, Tex., the junior high school players understand that a challenge for a match means that each party is to furnish one new ball.

It is well to remember that there is no royal road to success in tennis. There are few short cuts in learning the game. The player has to go through the same hard work that every expert before him had to do in order to succeed. Small details which may appear inconsequential at first sight to the beginner are the very foundations of tennis skills. It is not the purpose of the writer to go into any lengthy dissertations on these skills. Even in condensed form, there is enough detail to each stroke to take up an article by itself. Rather than dwell on any specific phase of the game, the writer will attempt to

Forehand Drive

Budge is shown in the pictures on this page making a top-spin drive. Top-spin is imparted by turning the racket over the ball at the moment of contact. The fifth picture shows how the racket has continued its turn-over during the follow-through. Top spin gives the player control of the ball. A flat-hit drive, while hard to return, is a difficult shot to control. Notice how Budge's racket seems to be a continuation of his forearm and how careful he is not to get too close to the ball. The follow-through is very complete with the racket finishing over the left shoulder.



cover the vital elements of the various strokes. Though individuals may differ in application, there are certain fundamental principles which must be applied by everybody for successful stroke production.

Orthodox grips

To the uninitiated it might seem that any way to grab hold of the racket would be as good as another. But the chances are that his grip would not be a sound one. Almost any grip will succeed at times, but the best selection is that which produces the greatest proportion of good strokes and the fewest failures. Three orthodox grips have been developed which will produce the best percentage of successful strokes. They are the Continental, Eastern and Western grips. In all these grips, the hand is never too far up the handle (choking), which causes a loss of power unless the player has an exceptionally powerful wrist, or too far down the handle, which causes cramped stroking on low balls.

The best forehand grip is the hand-shaking grip (Eastern) with the face of the racket perpendicular to the ground. For the backhand, the hand slides around the handle about a quarter turn until the thumb can be placed comfortably up the back of the handle. If it is more comfortable for the player, the thumb may be wrapped around the shaft. Held properly, the racket should not make a sharp angle with the wrist but should be more an extension of the forearm.

From the standpoint of footwork and coordinated body action, hitting a tennis ball is fundamentally the same as hitting a golf ball or a baseball. If you were going to hit a golf ball or baseball toward the net, you would stand sideways or at right angles to the net. Just so in tennis; the player must stand at right angles to the direction of the flight in order to give the racket and arm free play. The different is that in tennis it is necessary to estimate where the ball

will bound before moving the body into hitting position. In the other two sports the feet are anchored long before the actual striking. The big thing in getting set (in tennis) is to feel comfortable. The player's feet should not be too far apart and not too close together, but in the most comfortable position for stroking. The knees should be slightly flexed with the center of gravity squarely over the feet.

There are numerous exercises by which the class or team may be taught how to stroke from a lateral position to the net. For example, they may first be told to assume the proper position for a forehand drive. Then, by pulling the front foot back and stepping across with the back foot, they may fall into the proper backhand position. Thus, with two simple steps it is possible to shift into the correct positions for the two fundamental ground strokes. This exercise should be done several times each practice session, accompanied by a swing of the racket each time.

Most novices make the error of stroking with the arm only, while it is necessary for the power to come from a hip and shoulder pivot if controlled speed is to be possible. Beginners are also prone to stroke stiffly and fail to go down for the ball. One of the first things for a beginner to learn is to keep his eye on the ball. He should watch the ball up to and through the moment of impact with the racket. When it is returned to him, the first consideration should always be to keep away from the ball. Nothing will ruin an otherwise good tennis stroke quicker than to be too close to the ball when you try to hit it. A ball taken too close will cramp the arm and also make it difficult to shift the weight from the rear to the front foot.

The racket should be cradled with

the opposite hand while waiting for a return. Besides allowing for a quicker shift to either side, this position aids in the actual production of the stroke. When the left hand helps carry the racket back for the stroke, there is a natural and desirable tendency to pivot the body around to a position at right angles to the net.

The forehand and backhand are struck off the opposite faces of the racket in the Eastern grip. The turning is done by the left hand as the player anticipates whether the return will be to his forehand or backhand.

The most important single feature in connection with the backhand stroke is that the ball be struck about 12 to 15 inches forward of the right hip. When a ball is taken much later, the body interferes with any possibility of a free and full swing.

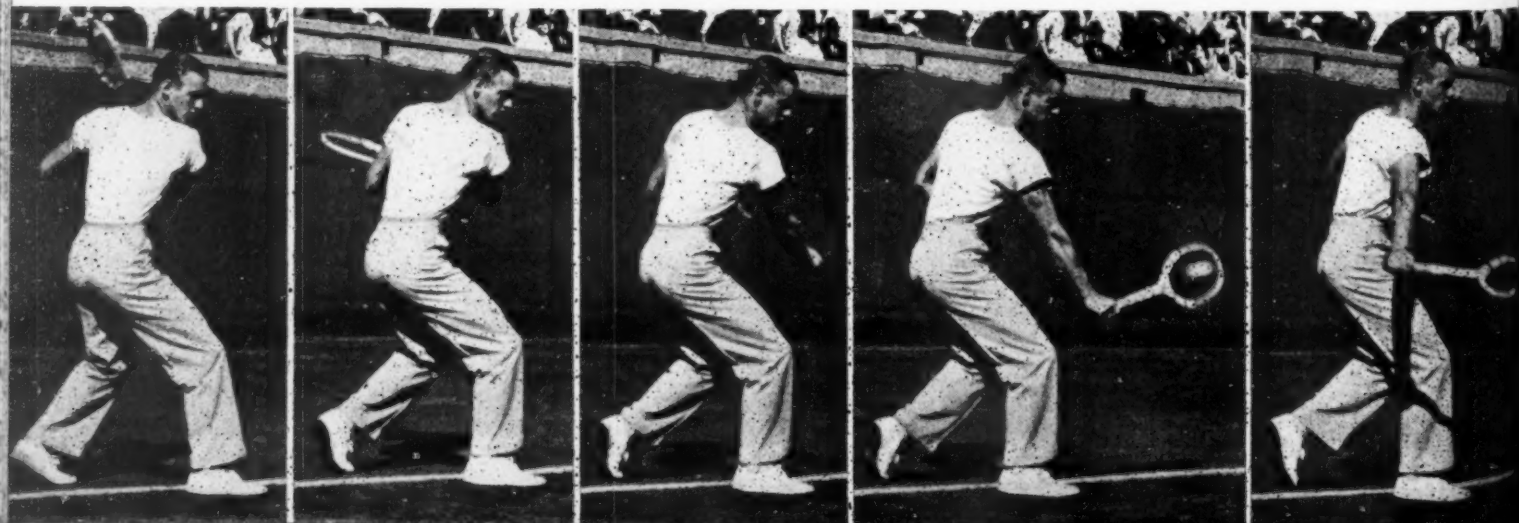
Service

Some experts believe that the service should be learned first by young players, because it is the starting point in a game. But this opinion is not shared by all the experts. So eminent an authority as Don Budge believes that the serve should be taught after the player has been thoroughly schooled on the forehand and backhand strokes. In reality the serve is not a difficult stroke to learn. Since the player tosses the ball into the air before hitting it, he is faced only with the problem of standardizing the toss and swing.

The serve should be made on a three-count rhythm with the left foot forward and about six inches behind the base-line. The angle of the left foot depends on the individual. According to the best dictates of form, the toe should be placed so that a slight pivot in serving will bring the

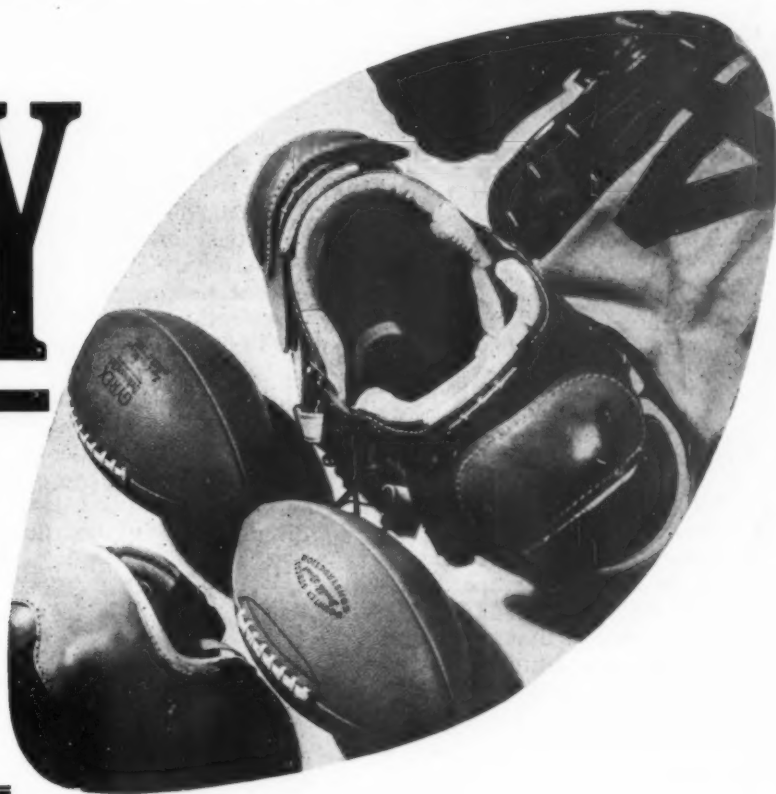
(Continued on page 44)

JOSEPH R. HUNT making an undercut backhand stroke. Joe Hunt, fifth in national ranking, uses the Continental grip. This is clearly shown in the fourth picture. Notice the angle formed by the arm and the racket handle. This type of stroke and grip does not produce a hard hit ball but gives excellent control. Hunt, in these pictures, is following the style of the French player, Rene Lacoste, who was famous for his control and ability to get the ball back. The first picture, taken at the height of the backswing, shows Hunt with his racket almost wrapped around his neck.



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COACHING THE HIGH SCHOOL SPRINTER

By Harry M. Scheue

The coach of America's schoolboy sensation outlines a complete race-day program for short distance men

Says Charley Paddock, erstwhile world's fastest human, of Harry M. Scheue, head of the physical education department and track coach at Huntington Beach, Calif., Union High School, "This well-seasoned but still young coach is one of the finest high school track coaches I know. He has had unusual success with his sprinters during the past ten years and has developed a number of great short-distance men, including two state champions. At present, Coach Scheue has under his wing one of the outstanding sprint prospects in America in Ed Morris, a boy who has never lost a 220-yard dash. Morris, who was recently chosen on Dan Ferris's all-America interscholastic track team, has run the 220 in 21s. flat."

ALTHOUGH scientifically minded men have been trying for years to knock the bottom out of the theory that athletes are "born" and not "made," there are still many coaches who believe that our better grade athletes come into the world equipped with some latent neuromuscular mechanism which produces a superior athlete when touched off in later life.

As a general rule covering all sports, this conception may not hold water. But in relation to sprinting, there is enough evidence to prove that our best sprinters are really "born." A long distance runner may improve his form, learn pace, develop stamina and become a star. A sprinter, however, can learn all of these things and still never win a race unless he has a tremendous amount of natural ability. Speed is the one quality that is definitely inherent and almost impossible to develop. Through the proper cultivation of form, the athlete may knock various fractions of a second off his time in the 100 and 220. But to skirt respectable figures, he must have speed to start with.

While speed is the basic requisite in sprinting, let us remember that this event involves something more than just being able to run rapidly. There are numerous physical and physiological adjustments which must be made and with which the athlete must be thoroughly familiar. These techniques can be roughly broken down into the following components: the start, pick-up, stride and finish.

In teaching form the coach must bear in mind that there is no one correct sprinting form. However, there are certain faults which are common in beginner sprinters and impede their progress. In order to help the athlete attain his maximum speed, it is the duty of the coach to recognize

these faults and provide a remedy. Some of the more common faults, together with remedial suggestions, follow:

1. Toeing out. Instead of driving with his toes pointing straight ahead, the boy will run with one or both feet toeing out, resulting in a loss of power. If the athlete cannot break himself of the habit, he may be instructed to practice running in a slightly pigeon-toed fashion. This compensating factor may straighten him out.

2. Weaving from side to side. To check on this fault, the coach may stand at the end of the straightaway or directly behind the runner, and



SPRINT STARS of the past and present. Charlie Paddock, the 1920 Olympic sprint champion, and Coach Harry M. Scheue's star pupil—Ed Morris, schoolboy all-American 220 sprinter.

observe him closely under full steam. The wobbling may be an unconscious error or one due to faulty arm or leg action. After correcting any errors of form, the coach may have the boy run on one of the white lines separating the lanes. The runner should concentrate on placing each foot directly on the line with toes pointing straight ahead.

3. Cross-arm action. A good sprinter uses his arms almost as much as he does his legs. They should be pumped vigorously straight ahead and not across the body. Since the arms are supposed to maintain body balance, any exaggerated cross-arm

movement will play havoc with the proper body alignment. A remedy for this is to have the offender concentrate on straight-away push and pull arm action. The trick of turning the thumbs up and out will work wonders for the cross-chest arm pumper.

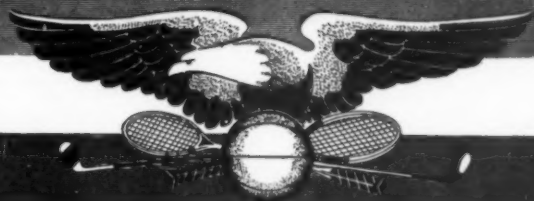
4. Tension in neck and shoulders. Long distance runners are more prone to be afflicted with a "shrug" than sprinters. The tie-up in the neck and shoulders is usually due to either fatigue or an over-zealous effort to increase the tempo. The fault is most evident during the latter part of a close race. It is difficult to prescribe a cure. However, if the runner does not throw his head back, keeps his chin on a normal plane and relaxes the muscles of his back, he will seldom suffer from tension around the neck and shoulders.

5. Lack of body lean. This goes hand in hand with the preceding fault and is one of the contributing factors to a muscular tie-up in the neck and shoulders. Instead of running with a good forward lean, the sprinter digs out with the trunk in a vertical position. This insufficient lean causes an upward and forward movement rather than a straight forward movement. One way of combating the fault is to have the boy train his eyes on a point about ten yards ahead. From an upright position with both feet together, he leans forward until he can no longer maintain balance. Just as he is about to lose complete control, he starts running. The idea is to maintain the body lean established by the stratagem.

6. General body tension. The fault is particularly noticeable in a close race when the sprinter is hard pressed and is making a desperate effort to run faster than he normally can. The fault, strangely, is the result of trying to run too fast. Every sprinter has a groove, stride or rhythm, whatever you want to call it, which he cannot step up without breaking form. Any attempt to overstep his bounds results in a decrease of speed.

Having had four of my boys run the 220-yard dash in 21.9 or better, I feel that perhaps I have hit upon the best method of running this race. On the afternoon of the race, the boy should stay off his feet as much as possible. If it is at all possible he should be kept out of other events. He certainly should not be running around the field watching the meet.

(Continued on page 34)



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BADMINTON-THE REGULAR DOUBLES GAME

By Carl Jackson and Lester Swan

For all-round strength and complete court coverage, the authors recommend the rotary system of teamwork

Carl H. Jackson and Lester A. Swan, both of the Northern Evening High School (for adults) in Detroit, are co-authors of numerous articles and books on badminton. Among their more recent efforts are two books, "Badminton Tips" and "Better Badminton," and an article in last month's Scholastic Coach, "Badminton Mixed Doubles Play."

IN BADMINTON, there is a fundamental difference between regular doubles, where two boys or girls make up the team, and mixed doubles. In mixed doubles, because of the disparity in speed, strength and endurance, the boy and girl deploy in an up-and-back formation. The doubles formation, on the other hand, assumes that the partners are equal or nearly so in this respect. Each player, therefore, assumes an equal share of the responsibility.

The alignment which enables the doubles partners to share the load is called a side-by-side formation. The players stand in their respective halves of the court side by side, or approximately so. However, the better players do not strictly adhere to these positions. To attain a better rounded offensive and defensive game, they use what may be called a rotation system. This is nothing more than a combination of the side-by-side and the up-and-back systems, employing the strength of each but avoiding the weaknesses. Rotation teamwork derives its strength from the fact that midcourt play will be from the strong forehand and overhead play of the left court player; and that better court coverage is possible if the players rotate when the situation demands it.

The left court player normally takes all placements along the midcourt line and those close to it in the right court, providing the flight is below shoulder level. Those above the level of the shoulder may be taken by the right court player if he has a good 'round-the-head' stroke; otherwise, these too would normally be taken by the left court player. To compensate for the latter's added responsibility, the right court player covers most of the net area, leaving his partner in a better position to cover the vulnerable outside back corner of the left court. This "coffin corner," requiring a long backhand return from the outside boundary of the court, is the most difficult spot to defend and, therefore, deserves special consideration in any

well planned defensive alignment.

The team rotates when either player is drawn out of position. For example, if the right court player is drawn to the extreme left side of the net, the left court player moves toward the right court. As soon as the net player can safely leave this area, he moves back—but this time into the left court, since he can move into that area more quickly than into his former position. During this time, the player in the rear covers the entire backcourt area, and eventually moves into his partner's former position in the right court. Similarly, if the left court player makes a return from the back of the right court,



Fig. 1

which he may often do more effectively than the right court player, the latter moves over into his partner's former position in the left court. After the return is made, the player in the backcourt moves forward quickly into his partner's former position in the right court.

It is apparent that by rotating in this way, team position may be more readily maintained and the offense and defense strengthened. Rotation also divides the play more evenly and does not limit the experiences of a player to either court or to any one department of the game. The doubles formation, with the partners in their normal playing positions, is shown in Fig. 1.

The first playing situation is the service. Figs. 2 and 3 show the positions for serving and receiving, and the possible placement points. These

points are the same as those for mixed doubles. But the service strategy naturally differs. In regular doubles, it is assumed that the partners and opponents are more evenly matched. There is no problem of getting into team formation after the service, as there is in the mixed doubles game. The players are already in their approximate team positions.

A uniform position for serving, whether the serve be short or long, low or high, better conceals the server's intentions. In the right court (Fig. 2) a driven serve to the back, inside corner, is difficult for the receiver to cope with unless he has a 'round-the-head' stroke. An occasional long, high serve to this corner is also effective. Besides being to his backhand, this serve tends to force the receiver out of position. With the receiver forced to stand close to the midcourt line (to guard this corner), the outside corner at the short service line becomes a very effective short service placement. These placements, of course, should be varied occasionally with a placement to the inside corner at the short service line.

The short serves must be accurate—close to the net-tape and gauged to fall just over the short service line; otherwise, they will be murdered. For the same reason, the long service must also be accurate—fast and low if a driven serve, and all the way to the backcourt if long and high.

Early in the game, the smart player will attempt to discover his opponents' weaknesses. He can feel out his opponent with a driven serve to the inside back corner of the right court. If the opponent displays a weakness here, serve a few placements to this corner and then suddenly sneak a short one over to the outside corner (short service line).

A little deception may be introduced here by swinging as you would in making a long, driven serve, checking the stroke and drawing the wrist back immediately before the impact to produce a short placement to the outside corner. In this situation, the receiver is liable to be too close to the center line (to protect the inside back corner) to cope with the short placement to the outside corner. In the long, high serve, deception may be introduced with a slow racket movement during the early part of the stroke, ending with

(Continued on page 22)

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S.C. 4-39

a quick flick to send the bird over the receiver's head and to the backcourt.

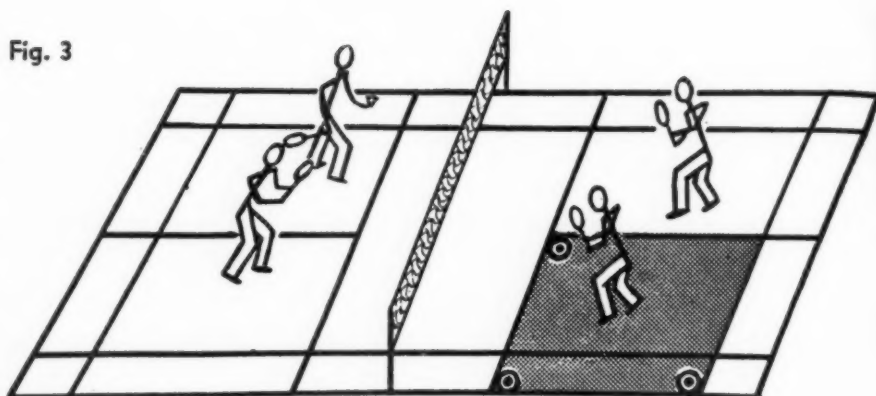
As a receiver, the player should rush the serve at every opportunity. By returning the serve with a quick drive over the server's head to the outside back corner, the receiver, with a little practice, will be able to rush serves even at net level. The server's answer to these tactics is the deceptive type of serve previously described. After being fooled once or twice into rushing what he thinks is going to be a short service, the receiver is likely to stay a safe distance away from the net and take no chances on rushing anything but the pop-ups. Remember, the racket must be carried high (preferably over the shoulder) if you expect to rush a serve.

In the left court (Fig. 3), the server's problem is more difficult. Here the most effective type of placement is one to the outside back corner. Since the bird is directed to the receiver's backhand and also skims the boundary at the same time, the placement is very difficult to return. Another point in its favor is the fact that it forces the receiver out of position.

A driven clear, just out of reach of the receiver but low enough to force him to hurry, is the most effective flight for this placement. However, in attempting this placement, the server must be sure of himself because of the angle of the flight. A clear from the left court, directed to this spot, is an especially fine set-up (from the receiver's point of view) if it falls short. The short service placements are similar to those of the right court. This time, it will be observed, the outside corner is to the receiver's backhand but not outside of his easy reach. Having less choice for an effective placement in this court, the server will do well to concentrate on safety rather than attempting to deceive the receiver.

It should be borne in mind, especially by the less advanced players, that the short serve is the safest bet for doubles. Since the doubles service court is two and a half feet shorter than for singles, it is necessary for the long, high, ideal type of serve to

Fig. 3



be that much shorter also. Hence, there is a great possibility of clearing dangerously short. For this reason, the use of a long, high serve requires more accuracy on the part of the server than in singles.

While the doubles court is shorter than the singles court, it is also wider by one and a half feet. This increases the effectiveness of short placements to the corners. The object of these placements is to force the receiver to move. It is only by keeping your opponents continually on the go that you can disrupt their formation and open up a weak court.

A right foot forward stance is preferred in serving because it gives better protection against quick backhand returns. For the same reason, advanced players also receive frequently with the right foot forward.

Strategy

The first return after the service is the cause of much confusion on the serving side if there is no prearranged agreement to cover this return. When serving in the right court, the server will have difficulty in handling a short return to the left side of the net. Ordinarily, the right court player is responsible for the net. Immediately following the service, however, the left court player should assume the responsibility for a short return to the left side of the net. Similarly, in serving from the left court, the server will have difficulty in covering a long return to the left backcourt immediately following the

service. This is because his service position is farther forward than his normal team position. Being in the left court, he would normally be responsible for a flight to this spot, but in the first return following the service his partner should assume this responsibility.

Net play

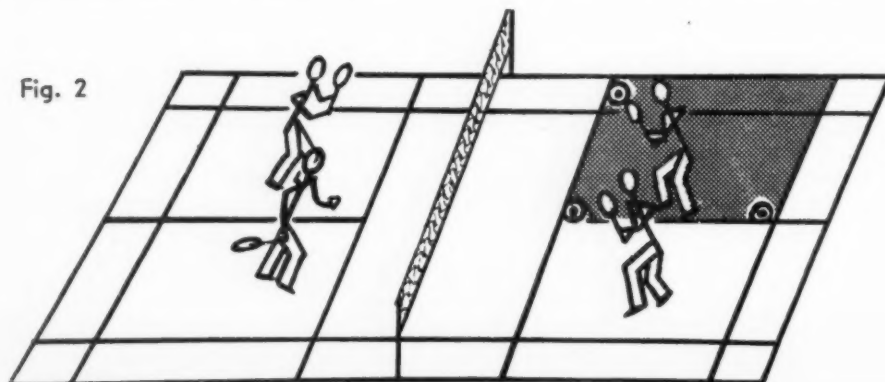
As one would expect, considering the formation, net play will give the doubles team no end of trouble if the responsibilities of each player are not clearly understood. The player making a return at the net is responsible for the play immediately following, should this return be likewise directed to the net area. After a return from the net area, therefore, he should be careful to maintain the position and balance necessary to make another return anywhere in this area. For this reason, care must be taken not to get too close to the net. Ordinarily, it will not be necessary to move the rear foot beyond the short service line. The beginner often finds himself frozen to the spot and caught flat-footed because he makes no attempt to recover court position and the balance necessary to move in any direction. However, in recovering position and balance, it is important to avoid being caught moving in any direction. This leaves the player open for a placement to the spot from which he is moving. This caution applies to play in any area but more especially at the net, since the returns here are shorter and give less time to correct errors of judgment.

As mentioned in our discussion of mixed doubles, when playing up, smashes should be allowed to go by, leaving them to the partner playing back at the moment. Obviously, the back player will have more time to handle these flights, and the bird will have slowed up a little.

On your partner's smash, cover the net in anticipation of a weak return and an easy kill. When smashing be-

(Continued on page 42)

Fig. 2



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RIFLERY AS AN ORGANIZED ACTIVITY

By Charles L. Wood

At the beginning, each club member may be required to pay an initiation fee and to bring his own cartridges

During recent years the increase in interest in the recreational type of activity in physical education has been very marked, and there has been a tendency to include such sports in the activity program of schools and colleges. Until a few years ago, for example, a boy who wanted to learn how to shoot had to go off on the quiet and learn as best he might by shooting at such targets as offered themselves. The idea of a girl learning to shoot was practically unheard of. Today all of this has been changed. At present there are almost 700 junior rifle clubs in the high schools of the country and at least 450 summer camps that give courses in organized rifle shooting. Charles L. Wood, rifle coach at the Upper Darby, Pa., Senior High School, passes along some suggestions on organization.

IN SELLING a program of riflery to high schools, there are always three questions that are raised.

First: Is it dangerous?

Second: Do we have the facilities for it?

Third: How expensive is it?

The question of danger is a perfectly natural one, and exists principally in the minds of those who are not acquainted with riflery as an organized activity. In reality, organized rifle shooting is the safest of all competitive sports. Statistics prove that a rifle in the hands of a trained boy or girl is no more dangerous than a hockey stick.

At Upper Darby, when the student body petitioned for a rifle club, the administration turned a willing ear to the request. We realized that students would shoot on the outside if they got the opportunity, and that it would be safer and more beneficial to give it to them under professional guidance. It was, and still is, our conviction that all the general benefits that can be derived from a sport are inherent in marksmanship, with the exception, perhaps, of certain neuromuscular skills. In particular, the hair-split accuracy that is necessary in rifle shooting calls for unusual powers of concentration and self-control.

The second pertinent question is: Do we have the room to accommodate this activity? Almost every junior or senior high school has some space that can be converted into an instructional unit for riflery. Naturally a room that could be devoted exclusively to the sport is ideal. But few schools have the extra facilities.

At Upper Darby, we discovered a forgotten stretch under our roof that enabled us to build a range adequate for five firing positions. Other schools, against whom we have competed, have utilized the aisle between their



STRAIGHT FROM THE SHOULDER: Up until a few years ago the idea of a high school girl learning to shoot was unheard of. Today, however, she is competing on an equal footing with boys.

heating equipment in the cellar. In another school, the athletic department made arrangements with a nearby armory to use the indoor range during free periods.

In surveying various areas for the purpose of constructing a range, disregard any area that is not at least 60 feet in length. Another four feet should be allowed on the firing line for each position.

Lighting

The question of lighting is one over which there is considerable discussion. It is the writer's opinion that the range should be well lighted in its entirety, with no direct rays of light striking the eyes of the shooters. The old-fashioned range with the entire area dark except for the targets, was a gloomy, dismal place at its best, and probably produced a decided eye strain on the marksmen. When we finally awakened to the possibility of shooting in a completely illuminated unit, there was a definite improvement noted in scoring.

Unfortunately, there is no income to be derived from riflery. The cost of the sport must be borne either by the marksmen or by the athletic association. There are usually some members of the club who are willing to pitch in with some of their own equipment in order to get the club started. At the beginning each mem-

ber may be charged a 50-cent membership fee and instructed to bring his own cartridges.

We had to do this at Upper Darby when we first started. Naturally our first year scores were very low. But it was a popular club and the money received from membership dues enabled us to gradually purchase better rifles and equipment. The club was finally recognized by the athletic association as an extra-curricular activity that warranted support, and was granted an appropriation. The money we received in subsequent years went into the purchase of superior equipment, so that today we have a well-equipped range. Significantly, with each improvement in equipment, a corresponding increase was noted in scores.

Adult leaders

A vital question that will confront the director who is thinking of riflery as an organized activity will be that of leadership. Unfortunately, there are few qualified rifle instructors who are not already sponsoring rifle clubs. However, this is not as great a handicap as it may be in other activities. The Junior Division of the National Rifle Association offers a free training course for adult instructors, covering ten subjects which will be of value in working with a
(Concluded on page 41)

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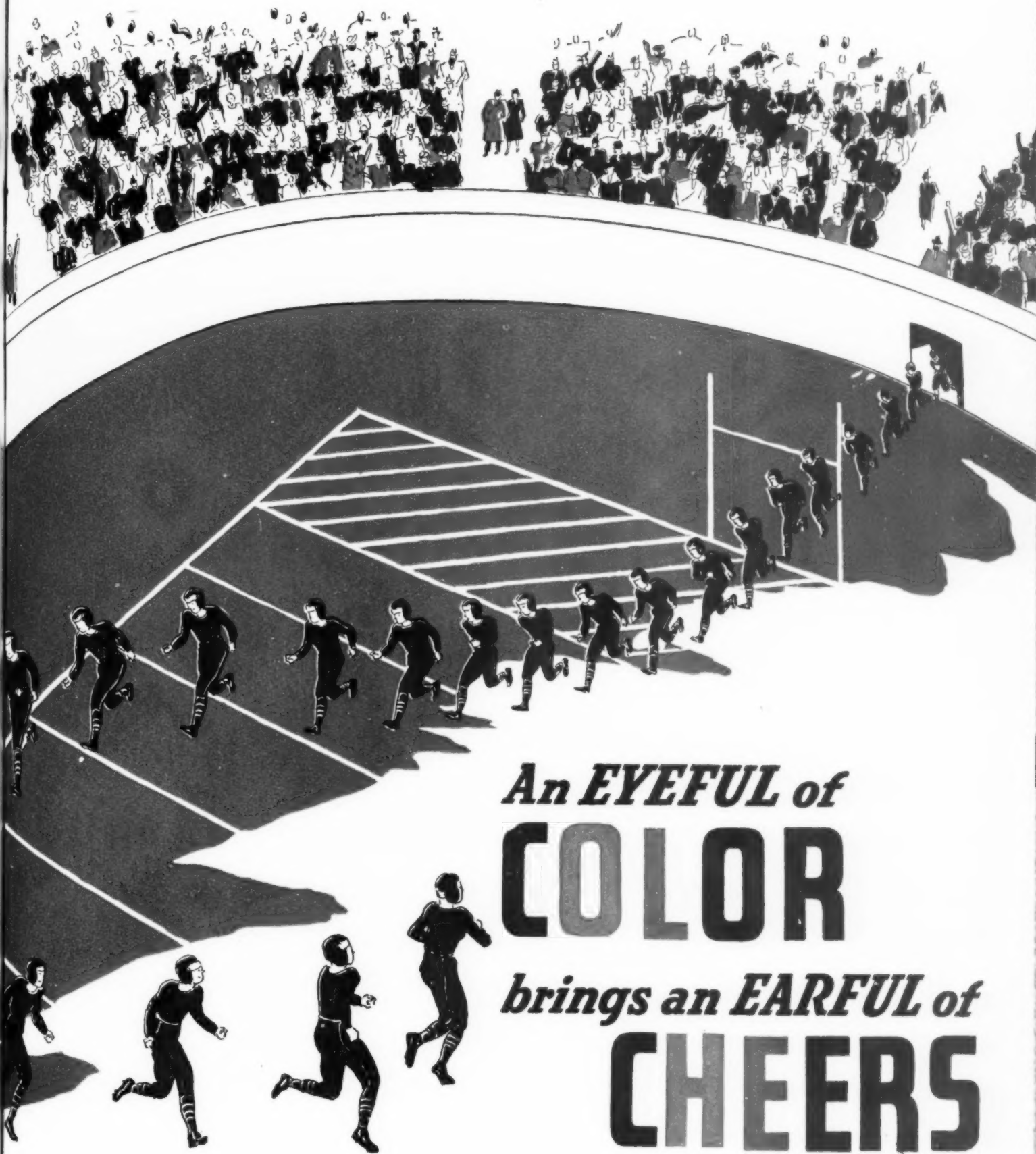
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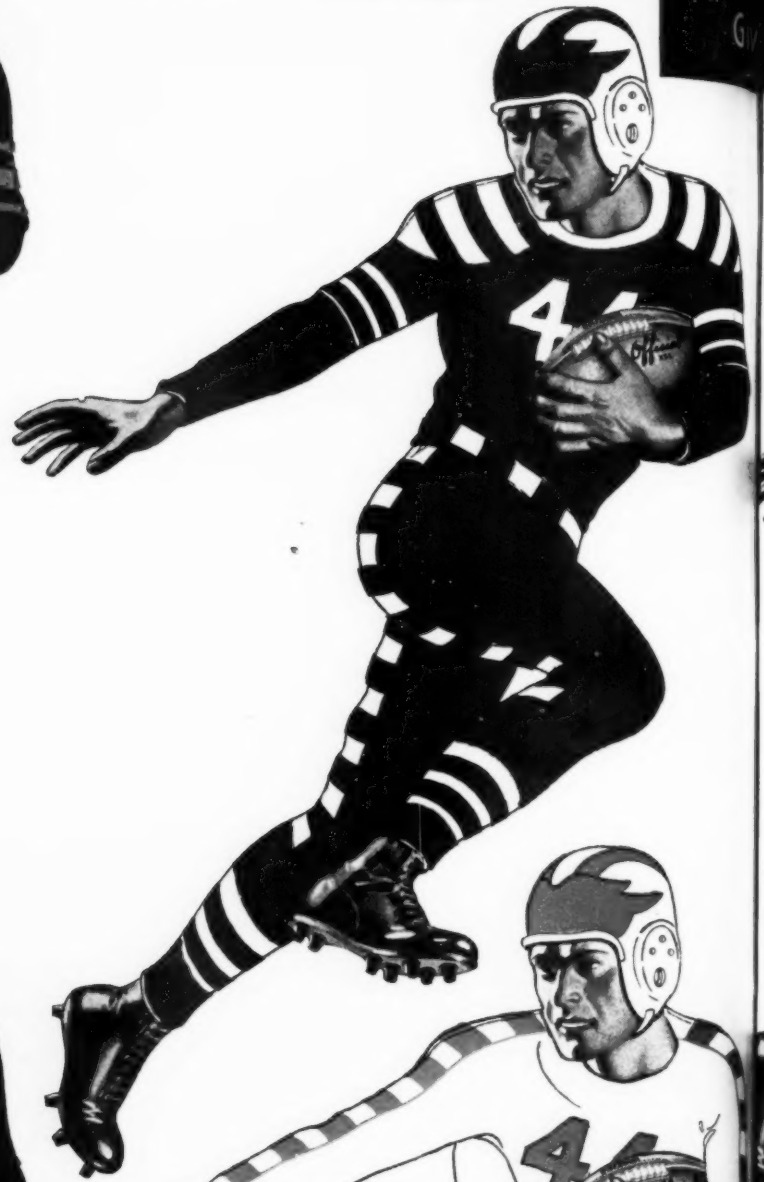
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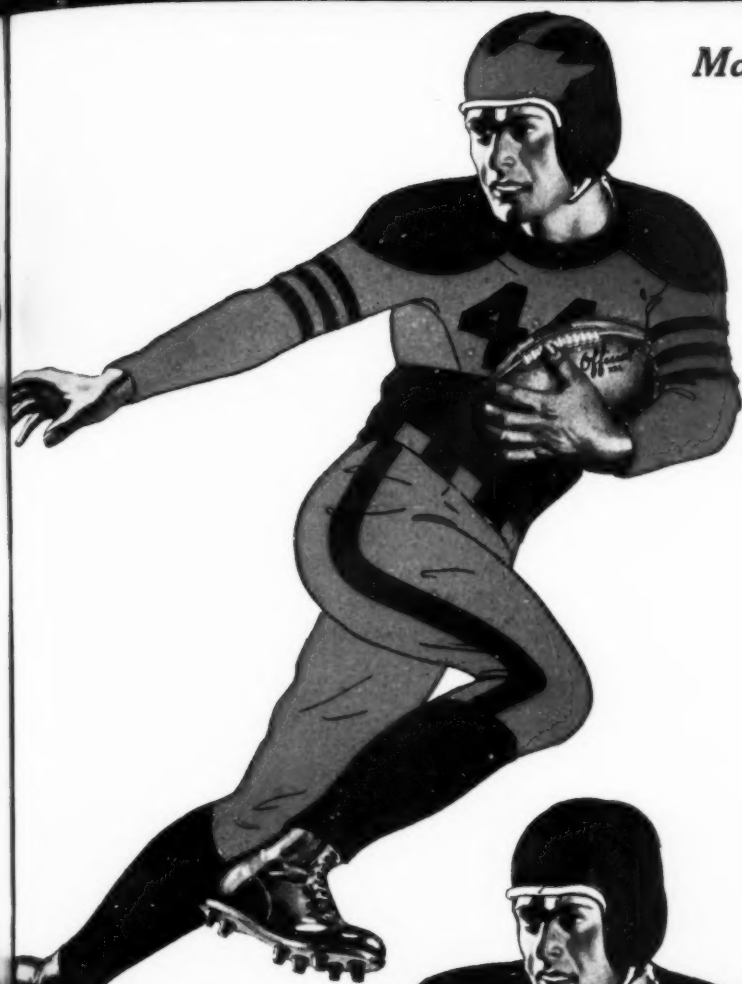
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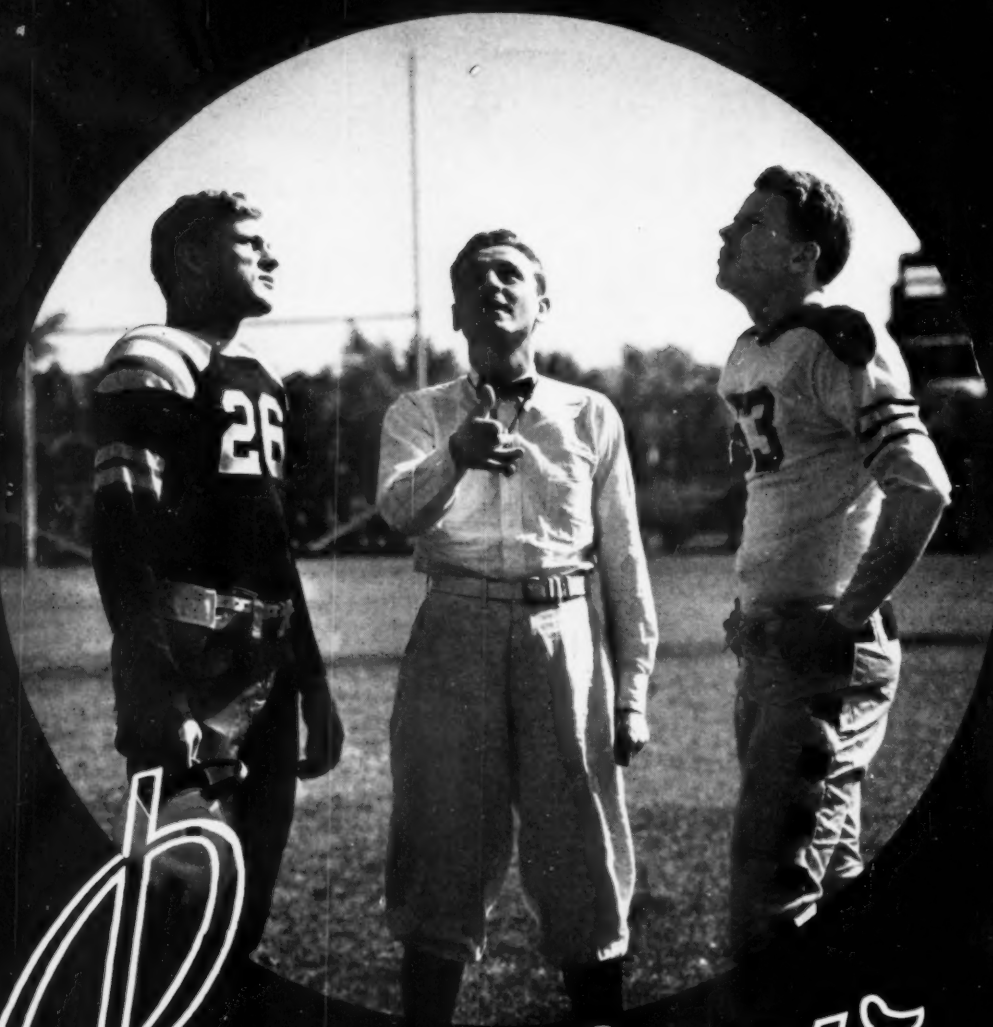
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5

No. 1: The start of the body turn, jump rotation form, with the weight chiefly on the right leg. The discus is carried about shoulder height, with a full extension of the throwing arm.

No. 2: As he pivots, the weight shifts to the left foot and the trunk rightfully proceeds the throwing arm. The head and eyes face the direction of the spin.

No. 3: As half of the turn is completed, the weight of the body is fully supported by the left foot. The extended left arm practically forms a straight line with the right arm. The discus is turned in the hand so that it is nearly vertical, and at a height slightly below the shoulder. The spring from the left foot is just starting.

No. 4: The jump action requires a high degree of skill and coordination. Both feet leave the ground simultaneously as the body speedily spins in the air. The discus, now at shoulder height, is carried in a vertical position. The trunk spins to the left well ahead of the throwing arm.

No. 5: The right foot has touched the ground a few inches ahead of the center of the circle, with the body well under control. The right knee is bent, and the right heel sinks almost to the ground, in readiness for the push-off which follows in Nos. 7, 8 and 9. The discus, now at shoulder height, will soon be swung to a lower point.

No. 6: The final pull on the discus is started, even before the left foot touches the ground. Apparently, Gaspar takes advantage of this "rock-over" motion. Observe in Nos. 7, 8, 9 and 10, that even the best throwers can apply power on the final heave over but one-fourth of the 360 degrees. Many discus throwers are fortunate to utilize one-eighth of the turn in applying maximum final effort.

No. 7: The left foot has touched the ground nearly in line with the right foot (slightly to the left). The spacing between the feet is shorter than that required by many good discus throwers. The body is still well controlled. The drive has started from the right leg, and the trunk is twisted sharply to the front.

No. 8: Three suggestions for improvement are offered. One, a more forceful upward-forward thrust of the right hip (starting with No. 7). Two, a more vigorous straightening or extension of the right leg. Three, a more pronounced bend in the left elbow which should be snapped backward to aid the forward movement of the right shoulder and arm.

No. 9: The discus has already left the hand, but the extended right arm is only slightly ahead of the shoulder. The body weight, previously on the right foot, has been shifted to the left.

No. 10: Gaspar does not employ the reverse, but instead draws the right foot ahead close to the edge of the circle to preserve balance. This form is efficient in keeping the driving right foot in contact with the ground until the heave is completed.



6



7



8



9



10

Art Wrotnowski

Southern California



No. 1: The start of the body turn. A moderate bend of both legs is shown. Body weight now on the right leg is beginning its transfer to the left leg. The trunk is turned extremely to the right, in readiness for a speedy turn to the left. The relaxed left arm is extended to preserve balance, and maintains this relative position throughout the throw.

No. 2: From a semi-crouch, the thrower is about to start the pivot on the left foot. The throwing arm is fully extended to provide the maximum arc.

No. 3: The photo indicates that a moderately rapid body turn is employed. The trunk inclination forward and to the left, may lead to imbalance if not corrected before the delivery stance is assumed.

No. 4: The body weight now rests on the ball of the left foot. The plane of the discus was changed temporarily to the vertical but will be horizontal before final effort is applied. Notice that the trunk rotates to the left in advance of the throwing arm.

No. 5: Indicates that Wrotnowski has planted the right foot in approximately the center of the circle. The discus has reached the high point in its arc (about shoulder height) and is starting downward. Here, again, the forward trunk lean is more pronounced than need be. The head and eyes are correctly turned in the direction of the body movement.

No. 6: The left foot has been planted (a moderate distance from the right foot) on the ground slightly to the left of the center line. The discus has reached its lowest point, and the act of delivery is beginning. Observe that the right arm is still correctly led by the trunk. The right knee is bent more than it should be. Extreme flexion may slow up the straightening of the leg and cause a loss of explosive power in the finishing thrust.

No. 7: The trunk is being turned squarely to the front with head and eyes in the direction of the throw. The body appears to be under good control. The athlete has over-delayed both the forward thrust of the right hip and the straightening of the right leg. While he makes some use of the left arm, the athlete could benefit by bending the left elbow and forcefully whipping it backward.

No. 8: The angle of release (26°) is slightly lower than the average (30°). The right leg, not fully straightened, indicates untapped power.

No. 9: No distance can be added to the missile henceforth, and the problem is maintenance of balance. The right leg is starting its forward movement. The right arm, having completed a vigorous whip, continues across the chest.

No. 10: The right arm is brought downward, and the left arm swung briskly upward to the rear. Wrotnowski does not use a reverse. His left foot stays "put" as the right leg comes forward.

The Discus Throw

(Continued from page 11)

The pivot-rotation method is more readily mastered by a majority of athletes, and has the advantage of permitting at least one foot to maintain contact with ground during the turn. The jump-rotation method tends toward a speedier turn, thus increasing angular velocity, but adds the hazard of imbalance just before delivery.

The style of hand hold is again a matter of the athlete's choice. Some prefer to carry the discus palm-up during the turn, while others, in the majority, perhaps, prefer the conventional palm-down form. The palm-up method provides a feeling of security as the missile is well supported on the palm. This permits the discus to be swung farther back of the body just prior to the body turn. However, since the discus must later be turned to the palm-down position, arm and hand movement becomes too involved in this style of throwing. Regardless of the type of footwork employed, the athlete may utilize either of these hand holds.

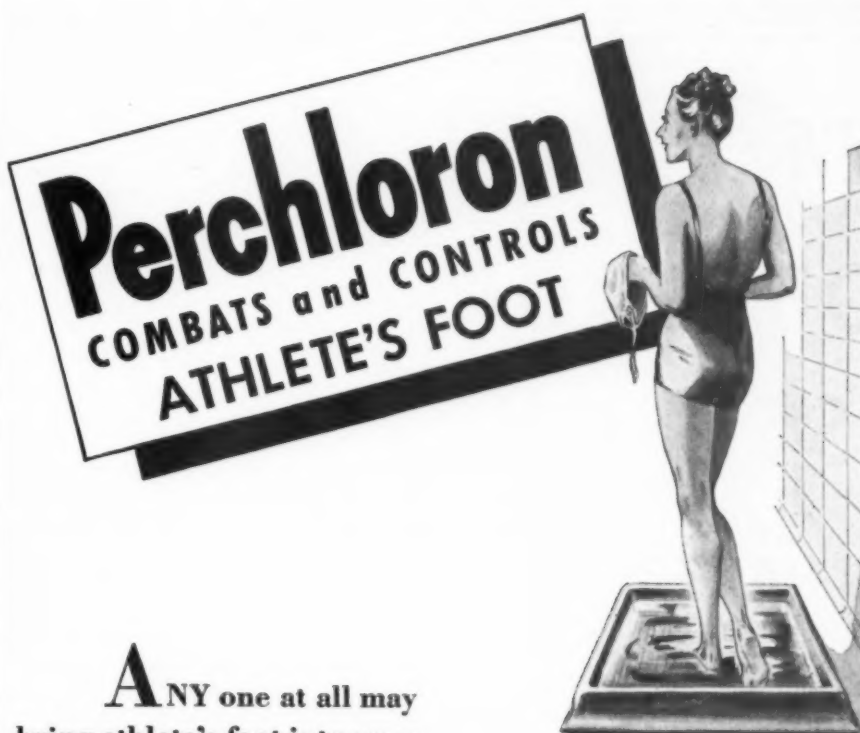
Preliminary swings

For years it has been customary, during the preliminary swings, for the athlete to make use of the left hand to support the discus at the end of the forward swing. Many champions now omit this and provide no support for the discus other than the right hand grasp. They do, however, rotate the forearm so that the implement rests on the bent fingers. The left arm extended for balance is swung in the same direction as the right arm.

If the thrower completes his effort by reversing the position of the feet, the ground covered in the turn should be less than for an athlete who doesn't use a reverse. Those employing the reverse, land with the right foot on about the middle of the circle. Those not reversing may rightfully land six to ten inches nearer to the front.

Delay in starting the final pull is a common source of error. If the athlete is conscious of the fact that the discus leaves his hand when it is just slightly ahead of the shoulder (and not at the full forward extension of the throwing arm), he knows he has but a limited area in which to execute the final heave.

The angle of release is lower than that for the shot. Measurements made from motion picture studies of the top-notch performers revealed an average angle of 30 degrees.



ANY one at all may bring athlete's foot into your pool... spread its danger on the floors of locker rooms and wash rooms. But not if you adopt the standard safeguard of using hypochlorite footbaths through which the swimmers must step.

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Rutherford, N. J.

Girls' Softball Play Day

By Roland F. Ross

At a first glance it may seem odd to find a physical education director writing on girls' play days. But there really is no cause for perplexity. In many of our small high schools, the physical education director is held responsible for the programs of both the girls and boys. Roland F. Ross, director of the Roxbury, N. Y., Central School, for example, has been doing double duty since 1930. During this time, he has organized and conducted many play days of the type he describes in his article.

IN THE past few years the philosophy underlying the athletic program for high school girls has been changing very rapidly. The emphasis has shifted from a program of limited activities for a few to a program of activities for all. The need for such a substitution has been the inevitable outcome of the present-day stress on "games for all." This emphasis, in a period when leisure-time activity is the growing problem, has made interscholastic competition, with its limited opportunities for participation, a wholly unsatisfactory and inadequate program.

In seeking an educationally sound replacement for interscholastic competition, the physical education profession has turned to more extensive intramural programs and to play days. Sponsored in the beginning by various university departments of physical education for women, play days in variously modified forms have grown into integral parts of programs for high school students.

Its purpose

The primary aims of promoting play days for high school girls are to permit healthful participation in athletic games, stunts, seasonal sports and rhythmical activities, to give students an opportunity to mingle with those of other schools, and to give them active experience in planning and executing the day's schedule. By healthful participation is meant spontaneous fun, unspoiled by the tension of over-excited audiences; fun that provides wholesome competition with a friendly, genuine, play spirit predominating.

Naturally there are many types of play days. They may be organized for students within a school, between neighboring schools or for geographical units. It must always be borne in mind that the successful play day is the result of careful planning, all of which should be done by student leaders under the direction of the faculty adviser. The training re-

ceived by students doing this type of work is invaluable.

The invitation committee is the first to function. The notice or invitation sent out to the guest schools should state clearly the following items: (1) date, (2) place, (3) arrangements for noon meal, (4) shower and locker room facilities, (5) time schedule for day's events, (6) how many girls to bring, (7) what schools are being invited, and (8) what equipment each girl should bring. The number of girls to invite from each school depends naturally upon the types of activities, the space and the facilities available.

Program for softball

At Roxbury we have had considerable success with a spring softball play day. The event is usually held on a Saturday, starting at 10:00 A. M. and extending through to 4:00 P. M. Each detail is carefully planned long in advance. As the girls arrive from each school, they are conducted to the dressing rooms by a member of the hostess committee. They check their valuables, get into their uniforms and then go to the field to register.

Each girl is given a colored arm band and a card with a small pencil attached. The delegate prints her name and school at the top of the card, and is then sent to a flag-staff which is flying the same color as her arm band. There she meets girls from other schools who have been assigned to the same team. The flags are about a foot square, made of muslin and fastened to five-foot poles conveniently located around the play area. When all the players have arrived, the girls on each team elect a captain.

Since most of the girls are strangers to each other, it is usually difficult for them to get acquainted immediately. So the first game is always an ice breaker. In this game the girls use the cards that were given to them when they registered. We call these "autograph" cards. At a signal, each girl is supposed to get as many signatures as possible within a given time. When the allotted time is up, the girl counts the number of signatures on her card and relays the total to the scorer assigned to her team. The team with the most signatures wins a certain amount of points. This point system should be used throughout the day, and should be inclusive enough to grant at least one point to

the team unlucky enough to finish last.

After the rush for autographs, the cards are collected and kept for the girls until the end of the day. The balance of the morning is spent on games involving softball skills. Among the skills that lend themselves well to softball are the throw for distance, running bases for time and pitching for accuracy. For the test on pitching accuracy, we have constructed a frame the width of home plate and with a height equal to the distance between a girl's knees and shoulders. This frame is anchored in a vertical position. A pitch going through the frame counts as a strike when thrown from the required pitching distance. A pitch hitting the edge of the frame and yet going through is considered to have nicked the corner and also counts as a strike.

Treasure hunt

Before taking time out for lunch, the girls are usually sent out on a treasure hunt. They are first called together and told what to look for, usually a small object that blends easily with the surrounding country, such as a green cardboard disk. On the back of the treasure, there are written instructions for the finder as to where to go for her prize. In order to include the event in the point system for the day, a certain number of points are awarded to the team whose member finds the treasure.

The girls are now ready for lunch. The usual procedure for the meal is to have each girl bring her own lunch, which she eats in company with the members of her team around the team flag. To safeguard against litter, five points are awarded to each team that leaves a clean area around its flag. The last part of the lunch period is devoted to team songs and cheers.

In the afternoon, the girls experience the actual game. The entire time is turned over to a round-robin tournament. This type of tournament is used in preference to the elimination type because girls want to be players, not spectators. Enough play areas are laid out to allow all the teams to play at the same time; in short, if there are eight teams there should be four diamonds.

Since the players always take a lively interest in the point standings of the teams, it is well to announce the team totals after each event or at frequent intervals. The scores may also be reported through a novel flag system. The colors of each team may be flown from the top of a flag-pole erected especially for the purpose. After each event, the flags are fast-

(Concluded on page 43)

YOUR PLAYERS' HEALTH



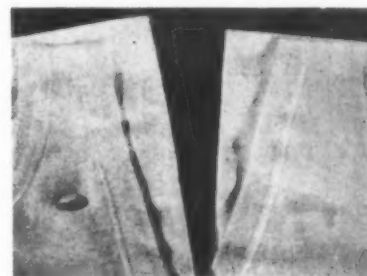
IS IN YOUR HANDS

An athletic shirt or knitted uniform made of ordinary cotton yarn cannot absorb and evaporate moisture quickly. As a result, perspiration is held against the body, often causing chill when exercise is stopped.

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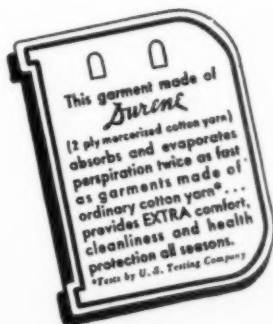
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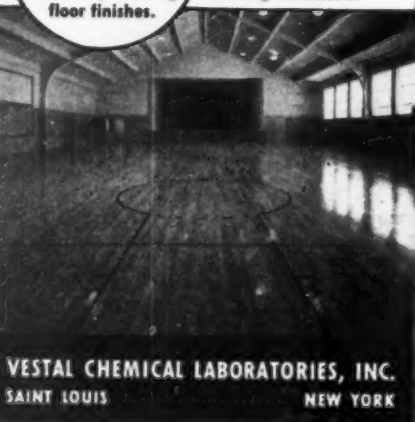
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Whistle Widow

By H. V. Porter

I AM the wife of a basketball referee. A few years ago I would have made that announcement as a happy boast. I had visions of delightful rides in the moonlight to nice, sociable basketball games. Before each half, when hubby would come to check with the timer, I would lift a hand and wiggle four fingers in a salute of encouragement. On the way home, we would recount the thrilling moments of the game. I would tell him the nice things the others had said about his work and he would tell me how I knocked out an eye or two with my new sports ensemble or with the hat that hangs on my left ear.

Why, oh why, didn't mother tell me? Somebody should have made a study of the business of being a referee's wife. Some of my friends have advised me to join a bridge club or go to the movies when Bill goes on a long trip to officiate. But I happen to be still in love with the man. Sometimes I spend the whole week resolving not to accompany him. I lay out the black and white striped shirt, the flannel trousers and shapeless shoes, and place the dog-eared rule book on top of the pile. The question then is: Shall I stay home and expect the worse or go along and see and hear the worst. He never will keep his overcoat buttoned after coming out of a hot shower or wrap his muffler around his neck. He falls asleep while driving alone. So I grab my galoshes and apply lip stick on the run.

Some ancient who believed in self-torture must have helped build my family tree. I have spent a goodly part of my life on narrow, board bleachers with ankles tucked in the folds of the overcoat that cushions the seat in front of me and somebody's knees making dimples in my back. My gloves and pocketbook have been on the floor so much that they have a coating of seal-o-san garnished with sweeping compound. My foundation garments slip and slide and make locomotion torturous.

But physical endurance is easy to acquire. It's the mental agony that tests a person's ability to take it. Freedom of speech, unfortunately, includes the raspberry and Bronx cheer. Once, when I still had some illusions about the wife of a referee, I happened to be sitting next to a heavy-jowled codger with a voice like a siren. For an entire half he bellowed all sorts of accusations against the officials. I fidgeted through the first quarter, burned silently during the second and erupted audibly in the third with a few reflections on his facial resemblance to a pickle and a stuffed prune. How was I to know he was president of the school board? (My Bill doesn't work there anymore.)

Gradually I have become immune to ordinary slander. I can even muster a smile when an entire cheering section chants, "Throw away the whistle, Jesse James." But when Bill once trailed a play by half a court, hobbling badly after twisting his leg, I could have murdered the bum with the high-pitched voice who yelled, "C'mon, grandpa, eat your wheaties."

In reality Bill is fast on his feet and doesn't cut a bad figure on the floor. It isn't any fun to be sitting anonymously among a bunch of coquettish junior leaguers who are throwing eyes at every good-looking male in sight, including the referee. Some of the glances are sickeningly eloquent. So are the comments. Do I rise to battle and slay with a killing look or strike out with a catty comeback? I do not!

Experience has taught me that the lesser of several evils is to tell all before the game starts. I may find myself in a group which includes the wife of the coach, teachers who are partisan fans and the wives of chamber of commerce dignitaries. I hasten to confess my identity and offer to isolate myself. Invariably they laugh away my suggestion and warmly welcome me to the friendly circle.

Through one game we may be the warmest of friends, but sooner or later the inevitable happens. The idolized forward is put out of the game on four personals at a critical time. Anyone can see it was the big guard who had no right to be in the way. The atmosphere in our friendly circle becomes chilly. And when the tying points are taken away in the last seconds because the center ran with the ball, there are icicles hanging on the curt farewells as my erstwhile friends flounce out of the gymnasium. I wait alone for a half hour that seems an eon. Sometimes the janitor speaks a cheery word as he goes about his chores but tonight he is glum. He turns out the lights and I stand in a draft ready to stick one foot in the door to keep from being locked in.

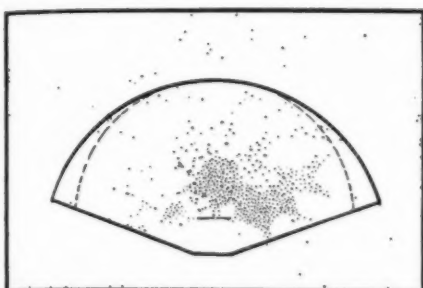
Why, oh why, can't people be sensible. Anyone knows that Bill is as honest as the day is long and his decisions are fair. After all it's only a game and not a matter of life and death. On the way home I offer to drive because my friends back there intimated that Bill may not be able to see the road so well. We stop at Greasy Joe's for a midnight hamburger with onion and trimmings. Life is an adventure again.

It is the week after the regional tournament. I am furious. In the finals last Saturday, Bill called a fourth foul on the cutest forward I have seen all year and broke the fifteen-game winning streak of the team I have been picking for the state championship. If you ask me, on that last foul he

didn't even touch him. For the last four days, Bill has been in the doghouse, getting his own breakfasts and taking his other meals out. I'm not speaking to the big lug.

In one way I am happy. For the first time this season I am not tortured by having to decide whether to go along this week-end. My mind has been made up all week. The rumble just heard is the garage door being rolled up. The car backfires a time or two as it is backed out. In a minute, it will be even with the kitchen door. I'm glad I'm staying home. Being a whistle widow isn't so bad after all. But . . . I grab coat, hat and galoshes and throw the night latch on the back door.

Hey, Bill, you've got a passenger.



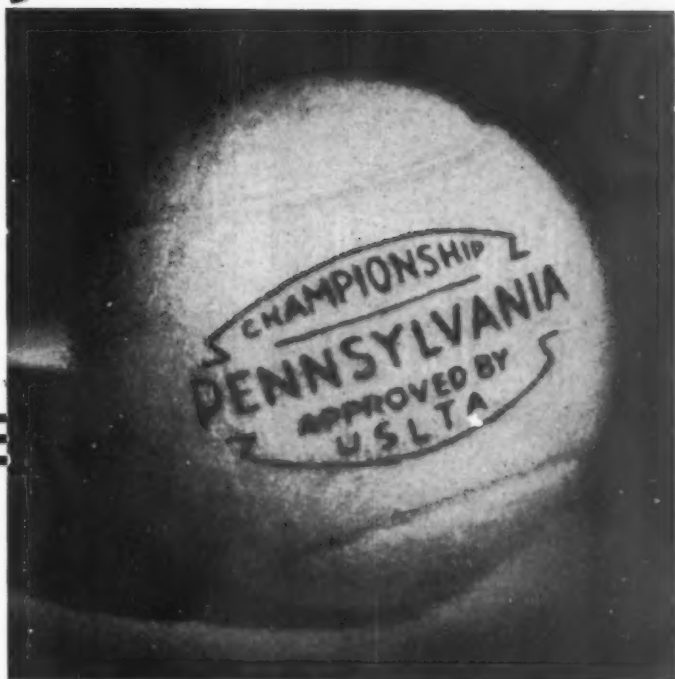
Modified Backboard Experiments

DURING the current basketball season, several interesting experiments have been conducted involving the use of a modified backboard. One of the most thorough studies was made by J. H. Trees at the De Kalb tournament. With the assistance of several statisticians, Trees collected statistics for 32 games. A different chart was used for each game showing the exact spot each time the ball hit the backboard. The data were then transferred to a master sheet (see illustration).

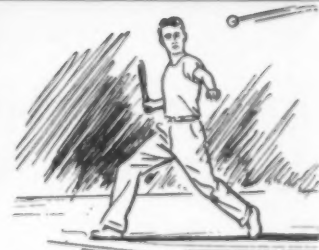
The figures indicate that the backboard was struck on an average of 60 times per game. The ball struck the surface of the board outside the proposed fan-shaped board only 5.8 times a game. It seems then that the lower six or eight inches of the board are almost never used and that a circle with a shorter radius but with a center slightly higher than the level of the basket would give all the rebounding surface that is necessary.

The superfluous area has been retained only because of tradition or because little organized attention has been given the matter. In the meantime, the modern backboard is a detriment to the game. Besides cutting off the view of the spectators sitting behind the baskets, it is sometimes a hindrance on running lay-up shots. It is a challenge to progressive minded basketball men. (For a complete discussion of the subject and several possibilities for modified backboards, see H. V. Porter's article, "If We Started From Scratch," in the November, 1938, *Scholastic Coach*.)

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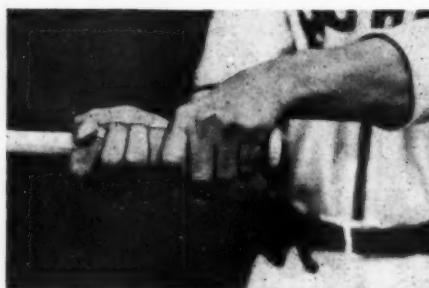
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Batting

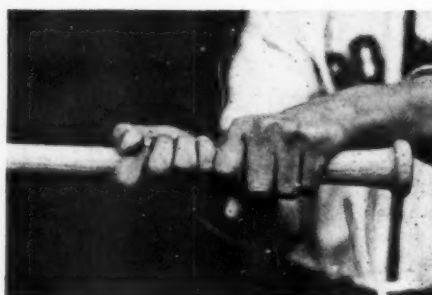
(Continued from page 12)



End Grip



Choke Grip



Modified Choke Grip

balls and one toward the back of the box when batting against pitchers who rely mainly on fast pitches.

Although, as has been previously stated, it is impossible to tell a player to stand a certain way at the plate, a wide spread of the feet may prove helpful in the elementary stage of batting. This eliminates an early step and long stride and prevents pulling the body away from the plate. These are common faults and must be overcome before even moderate success in batting can be expected.

The hitting position

It is important to have the bat back in the hitting position when the ball is ready to be delivered. This makes it impossible for the pitcher to quick-pitch to advantage. A high position of the bat is also advised because it is easier to drop the bat for low pitches than raise it for high ones.

It is important to delay the step with the front foot until the likely location of the pitch is determined.

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the same
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This permits stepping toward or away from the plate in accordance with the pitch, thereby increasing the likelihood of perfect timing and making it possible to hit the ball where it is pitched. The majority of players do not delay their step in this manner but rather step early and as a result pull most pitches. These players are nearly all good fast ball hitters for the reason an early step offers the best means of hitting the fastest pitch.

On the other hand, they usually have a definite weakness on slower pitches because at least a part of their weight is transferred from the back foot too soon, thus making it necessary to hit the ball almost altogether with the arms. This is especially true if the pitch is in the outside strike area. The player who delays his step has no such weakness, and because he may hit to any field a less effective defense can be formed.

The swing

The swing usually varies according to the grip. For instance, players who use an end grip generally make a complete sweep with the arms whereas those who employ a choke grip move the arms only a short distance. The bat should be whipped parallel to the ground with loose arm action and the wrists snapped at the time of contact. (It is advisable to lower the barrel end of the bat on low pitches.) This increases the chances of meeting the ball and adds power to the swing.

The speed with which the bat is brought forward is also a factor in batting. Many players favor a hard swing thinking the ball will travel a greater distance. However, this frequently causes unbalancing and poor timing; so a moderately hard swing is likely to prove more satisfactory. The swing is particularly important if the batter is attempting to hit to the opposite field on a hit-and-run play or, as often happens, when a right hand batter tries to hit behind the runner. In this case, it is advisable to push the hands ahead of the hitting end of the bat and employ stiff wrist action instead of taking a conventional swing.

The follow through

It is important to follow through with the body in the direction the ball is hit. This places the entire weight behind the swing and makes possible maximum driving power. The actual body turn thus varies according to where the ball is hit, a complete turn being advisable when balls are pulled and less of a turn on balls hit to the opposite field.

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Dolcorock has been used by colleges and high schools boasting championship teams. It has been used by schools with poor teams. The consensus is that Dolcorock has helped make the game more enjoyable for everybody. We'd like to tell you more about it. Please send for manual S4.

DOLCOROCK

The C. B. DOLGE Co., Westport, Conn.

Coaching Sprinters

(Continued from page 18)

Have him lying on blankets or canvas off the damp ground, clothed in a warm sweat suit.

Thirty or forty minutes before the race he should take five minutes stretching exercises and other calisthenics, then go one lap as follows: quarter lap jogging, quarter lap half-stride, quarter lap walking, quarter lap at three-quarter stride. (All this in sweat clothes.) Now have the boy return to the blankets, give him a brisk rub down and cover him warmly until five minutes before the race.

When it is time for the race, get him on the track in plenty of time to dig holes, or set starting blocks, and take three or four starts. These starts should increase in speed and length, starting with about twenty-five yards and working up to about one hundred yards for the last one. (These starts to be taken in sweat clothes unless it is a very warm day.)

The "float"

Omitting the technique of the start, I will go into the actual running of the race. At the gun the boy "digs out" for about fifty or sixty yards. As soon as he feels that he has gained maximum speed, he goes into a "float." This is perhaps the key to the entire problem. A "float" is difficult to describe, but nevertheless it is a definite thing. The boy exhales violently the breath he took in at the starter's command "get set"; he quits pulling and actually tries to relax his body muscles. If this operation is performed properly, you can actually see the runner cease his feverish driving and settle into a smooth glide. The sprinter is now gliding along just a little under maximum effort. He holds this "float" until approximately fifty yards from the tape.

At this point, if he is well out in front, he maintains the "float" right on into the tape, making no extra effort to speed up his pace. If the boy is forced to make a race for it in the last fifty or sixty yards, he comes out of his "float" as follows: He takes a deep breath, thrusts his chin slightly forward (not upward), keeps eyes on track only ten yards in front, makes a conscious effort to increase his body lean, swings arms just a trifle faster, and tries for a little more drive off the balls of his feet. He runs right through the tape and does not lunge at it.

All this may sound quite complicated, but constant practice in going from the dig and pull into the "float,"

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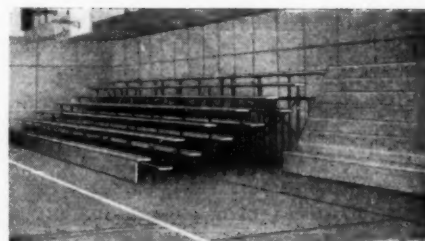
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and then back again, will give the boy the idea.

If your boy is in several events, or must run in several heats, give him a teaspoon of ordinary baking soda in a glass of water one hour before the race. After the 220 heats send the boy into the gymnasium for a three-minute cool shower bath and top it off with a brisk rub down. Now wrap the boy up warmly and have him relax until time for the final race. The effect is equivalent to about two hours rest. I tried this last spring after my boy had run two 100s and one 220 and he responded with a 21 3/10 performance.

General suggestions

Most sprinters of high school age do not need more than six weeks to get themselves into top running form. It is a good idea for the sprint candidate to start his season with about a month of preliminary training. At the end of four weeks, he will be ready for speed workouts. The boy may build up for the competitive season with a series of workouts along the following lines: (a) Ten to fifteen minutes calisthenics on the turf. The boys should take turns in leading these loosening-up exercises. (b) Two to six laps of shacking, jogging, walking, quarter stride and half stride, mixing up these various speeds for about a quarter lap each. No boy should run faster than half speed and should stop as soon as his muscles begin to tire. During this period the coach should be concentrating on form. If necessary, the boy may be instructed to step up to three-quarters speed, but he should never be told to give out completely. It is better to give a boy a little less work than you think he needs than to over-work him.

Building interest

If a university or college is close by, the coach may have his sprinters work out occasionally with the college runners. The college coach will usually be pleased to have the high school boys, and the college runners may serve as an inspiration to the schoolboys.

There are numerous other methods of keeping the boys interested in track. A scrap book on sprinting may be kept in the school library with a blank page attached for signatures. Every time the boy visits the library he signs his name to prove that he has read and studied the material. The bulletin boards may also be covered with track pictures and articles, also records of your own boys, other boys in the league, and points scored. The boys like it and it gives them something to shoot at.



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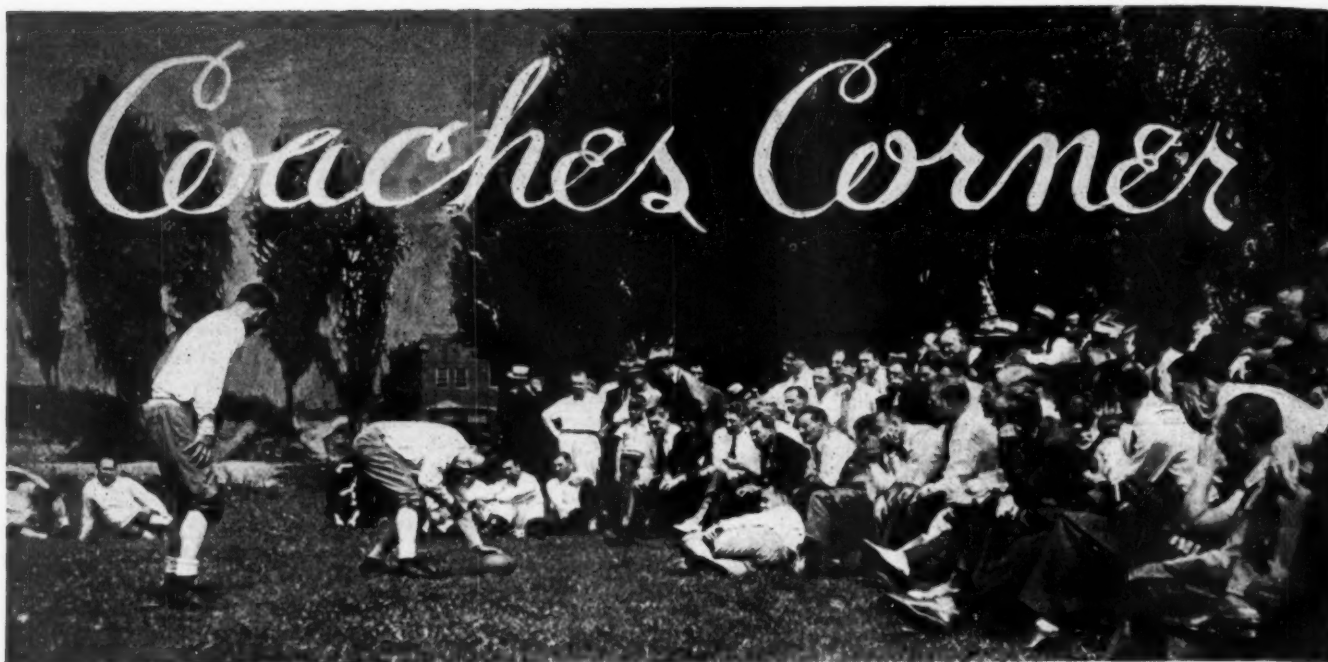
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If you have something for this column send it to Bill Wood, Evanston Township High School, Evanston, Illinois.

The prize package in this month's unusually well-filled mail bag comes from Coach Dell Johnson of Cheney, Kan.

"The following amusing incident happened a few years ago when I was coaching at Attica. In a game between Attica and Sharon, the Sharon coach decided to use a little strategy by starting his second stringers. In less than two minutes, Attica was leading 9-0. Hurriedly the Sharon mentor ordered his regulars into the ball game. In the excitement he tried to expedite matters by jerking off the warmup shirts for the boys while they were removing their warmup pants. One of the lads took his work too seriously and pulled off his playing pants as well as the warmup garments. In a flash he reported to the scorekeeper and dashed out onto the court. He was amazed when the game was suddenly stopped. Never before had he received such an ovation upon entering a game. Prancing on his toes, ready to go, he reached down to give his pants that final hitch. What a surprise!"

Beginning next fall, New Trier High School, Winnetka, Ill., will enter upon a coaching experiment that possesses interesting possibilities. Briefly, it is planned to have the same coach stay with a particular group of boys during their entire high school career. He will serve as freshman coach for the first year, as sophomore coach during the second year, and as varsity coach when the squad members are juniors and seniors. When his squad graduates, he will start over with a new freshman group. It is rumored that other suburban schools in the Chicago area are contemplating a similar experiment. We wonder how large a coaching staff it will take.

The game itself is enough to occupy the attention of most players, but Nat Hickey of the famous New York Celtics recently took on the added responsibility of broadcasting as he played. He gave a play-by-play account of the game with an all-star Cleveland team through the use of a micro-wave transmitter which broadcasts by short wave without the aid of wires. At times, he carried the transmitter in one hand and dribbled with the other.

The students at Benton, Ill., take their tournaments seriously. Over one hundred of them hiked six miles to cheer their heroes on to victory over Johnston City in the semi-finals of the regional at West Frankfort.

Stewart Cooper, well-known official and coach of the Roosevelt Junior High squad of Cedar Rapids, Iowa, thinks that the rule makers should outlaw bone breaking in basketball games.

"In a recent freshman scrimmage, one of our guards, Kenneth Little, hacked forward Fred Bissell with such force that a bone was fractured in Bissell's hand. I still don't believe it, but an x-ray showed the injury. The play was entirely legal since the blow was on the back of the hand."

Those "Poolless Wonders," the Illinois College swimmers, have won their fifth consecutive conference title. The Blueboys, the only team in the Illinois College conference without a pool, do their practicing in the Illinois School for the Deaf tank.

The schoolboy scoring king of the Middle West is undoubtedly Clarence Shera of Tiffin, Iowa. His total of 501 points for the season includes a 72-point scoring spree against Ely. Allen, the other forward on the Tiffin team, hit a mere 400 points for the year.

The intercollegiate basketball scor-

ing record for one season is now held by Chet Jaworski, Rhode Island State center, who finished this year with a grand total of 477 points collected in 21 games. The former record of 465 points was held by Hank Luisetti.

As the curtain rings down on the basketball season, we notice that it was a 15-year old ninth grade girl who really hung up a record to be envied. Late in January, when Green Creek, N. C., walloped Sunnyview 102-10, Aileen Cudd scored 45 field goals and 9 free throws for 99 of the points.

Congratulations are in order for Coach H. S. Conner and his gallant band of Hurricane, W. Va., warriors for their stunning last second upset of the powerful St. Albans Red Dragons in the sectional tournament held at Nitro. Twice soundly trounced by St. Albans during the regular season, the Hurricane Midgets opened up with a long range attack that gave them 19 field goals out of 31 shots.

Coach Burl Shook, of Short High School, Liberty, Md., reports one of the season's unusual games. In a "B" team game won by Centerville, Short High trailed at the end of the first half by a score of 10-0. In the second half Centerville failed to score, but Short High's 8 points were not enough to tie up the game. A similar situation developed last year between the "B" teams of two Iowa schools, Monticello and University High of Iowa City.

We thank Bert McGrane of the Des Moines Register for this next one.

"That's a fowl," said Sam Nuzum, Des Moines basketball official, as he came out from under the bleachers with a baby chick in his hand, after retrieving a wild pass during a girls' district tournament game at Winterset. Sam says that he never did learn where the chick came from.

When Kalona, Iowa, the district Class B champions, took the floor in the recent tournament at the University of Iowa field house, nobody wanted to keep score. The line-up included the brothers K. Guengerich and D. Guengerich at forward, H. Gingerich at center, M. Gingerich and N. Gingerich at guard. Other names that appeared in the Kalona box score were: C. Yoder, D. Yoder, F. Yoder, and Hessel-schwerdt. Wonder how H. sneaked in there!

Bob Heinzelman of Falls City, Neb., is a man of his word. Last year as a little sophomore substitute he missed a long shot that would have given his team a 34-33 victory in a first round tournament game. With tears in his eyes, he promised that he would show 'em next year. He would help his team win a state championship or break a leg trying. He did both. In the final quarter he shot a free throw that tied up the championship game, then sank a field goal that won it. A few seconds later he was carried off the floor with a compound fracture above the ankle.

The total athletic budget at Black Mountain College is said to be \$12.80 per annum. Favorite sports include digging post holes, chopping trees, and corn husking in addition to basketball, tennis, badminton, swimming, handball, volleyball, and football. Boys and girls, it is claimed, participate on a more or less equal basis in all sports.

For the first time in history Roodhouse, Ill., found itself among the sixteen teams in the state finals at Champaign. The star guard on the team was Byron Roodhouse, a descendant of the man for whom the town was named. Had Roodhouse gone beyond the opening round of the tournament, Byron could not have played. Since his twentieth birthday fell on the last day of the tournament, he would not have been eligible for the semifinals on the morning of that day.

By this time a good many coaches will be able to echo Eddie Brietz's summary of the "half-time score in Texas Christian's opening spring football practice: influenza, 12; operations, 3; practice injuries, 2."

When a dog bites an ordinary man, it is not news, but when a dog rushes into a friendly wrestling match to protect his master and comes out with spare parts of the coach's anatomy, he gets his picture in the papers. Coach Wes Brown of Northwestern University was demonstrating a hold to Nick Cutlich, star football player, when some of Nick's fraternity brothers heaved into view with their mascot, "Wedge." The giant Chesapeake Bay retriever lost no time in going to Nick's assistance. Coach Brown received a slashed lip and a long gash over his left eye before "Wedge" was led away to the dog pound.

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New Books on the Sportshelf

THE ADMINISTRATION OF HIGH SCHOOL ATHLETICS. By Charles E. Forsythe. Pp. 413. Illustrated—tables. New York: Prentice-Hall, Inc. \$2.

THE author is particularly qualified by experience and broad educational vision to write a book on the general aspects of high school athletics. Mr. Forsythe was himself an athlete in high school and college and later served as a schoolboy coach and faculty manager. In his present position as state director of high school athletics in Michigan, he has had an opportunity to handle all types of athletic problems. His work in building up high standards of athletic competition in his state has won him the confidence of all individuals concerned with athletics—coaches, players, officials and administrators.

His book was prepared to aid two groups of people: those who expect to become teachers, supervisors or directors of physical education and athletics; and those already in the field administering high school athletic programs. The author assumes that the coach comes to his job with both technical knowledge and playing experience. His purpose, then, is to offer practical suggestions and guides for managing the business affairs of an athletic program.

He discusses such items as national, state and local policies concerning athletic eligibility, contest management, equipment, awards, finances, budgets, layout and maintenance of facilities, intramurals, girls' athletics, junior high school athletics, and current athletic trends. Figures and tables are used to illustrate and explain some of the more progressive policies now in effect in schools and state associations.

The author has done a tremendous amount of research. A nation-wide collection of diverse rules has been boiled down into clear and concise form. All ideas pertinent to the subject of school athletics will be found somewhere in the book. The volume is characterized by clearness, conciseness, comprehensiveness and excellent organization.

KEEP FIT AND LIKE IT. By Dudley B. Reed, M.D. Pp. 325. New York: Whittlesey House (McGraw-Hill Book Co., Inc.). \$2.50.

WE made a startling discovery last month. After all these years, we found out we were a kindly and tolerant person. And, what's more, a good sportsman. A little birdie had nothing to do with it. We read it in a book—Dr. Reed's book. He says that anybody who can struggle, or even skip, through the pages of *Keep Fit and Like It* must be a good sportsman, etc. And since we did it with-

out even a modicum of skipping and struggling, you can hardly blame us for feeling pretty chipper.

Perhaps, as Dr. Reed intimates, we are not unduly critical, but there really is no good reason why anybody can't go through the book without the aid of an anaesthetic. The author, who is director of student health service and professor of hygiene in the School of Medicine at the University of Chicago, aims his book primarily at those who do not sufficiently appreciate the value of physical activity.

He approaches the subject from two angles: (1) he explains briefly the physical and nervous make-up of the human body and its need for exercise; and (2) he shows how exercise can be fun rather than the grudging chore so many make it. Different people need different sorts of exercise, and the author gives the many different ways they can get it. He tells when and how much, and evaluates and describes such sports as golf, tennis, bowling, swimming, hiking, riding, and skating.

BETTER BADMINTON (The Barnes Dollar Sports Library). By Carl H. Jackson and Lester A. Swan. Pp. 150. Illustrated—free-line drawings. New York: A. S. Barnes & Co. \$1.

WHAT month goes by without a book or some article by the badminton doubles team of Jackson and Swan? Their efforts per annum on the bird-racket game are multitudinous. *Better Badminton* is the second book they have turned out in the past six months. (Their first, *Badminton Tips*, was reviewed in the December *Scholastic Coach*.)

Most of the contents of their latest volume appeared originally in various athletic periodicals. Readers of *Scholastic Coach*, for example, will recognize some of the material and illustrations that appeared in the series of articles by Jackson and Swan last April, May and June.

This is not intended to be an indictment of the book, for *Better Badminton* is a complete guide to the sport. Here, under one cover, are all the basic techniques of badminton for coaches, beginner players and experienced players. Every phase of the game is covered in detail and completely illustrated with many excellent free-line drawings of court strategy and strokes. The singles and doubles game, the fundamental strokes, the bird flights and returns, strategy, and footwork are all clearly and concisely discussed.

This volume is the seventh addition to Barnes' Dollar Sports Library. The sports previously covered include baseball, football, track, handball, archery, and basketball. At least ten other volumes are being contemplated.

CINÉ-SPORTS LIBRARY: *The Pole Vault, The Sprint Races.* Pp. 124. Illustrated. Indianapolis: International Sports, Inc. \$1 each.

WE HAVE here the beginnings of another dollar sports library. There is no cause for alarm, however. If your sportshelves are already groaning under the weight of an enormous number of books, it won't be necessary to buttress your bookcase. To house the complete series, all you'll need is a nice big pocket. For the Ciné-Sports series consists of ten six-by-four-inch paper-bound flip books. Two of the books have already been published, the other eight will soon follow.

A flip book, as you probably know, is a picture book organized in such a way that by flipping the pages from cover to cover, you get a moving picture sequence of some particular bit of activity. The value of such an arrangement, from a coaching angle, is obvious. Instead of going to a track meet or to the cinema for a complete demonstration of an event, the coach or athlete may keep a paper movie strip in his pocket.

The Ciné-Sports pocket coaches, however, are not strictly picture books. They also contain a complete article on the event, information as to diet, a training schedule, medical aspects, common injuries and their care, a decathlon table, and many coaching hints.

To get in all this material, each book is arranged so that the pictures and their captions appear on every right-hand page. Each panel is divided into three sections. The center strip is from the sequence of the event. The strips above and below are smaller and are divided into two sections. Each of these sections (four, all told) show a practical warm-up exercise related to the event. When the book is flipped over, and it only takes you 2 1/5 seconds to do the trick, the flipper sees a movie of the event and the related exercises.

The articles for the flip books on sprinting and pole vaulting were written by Dean Cromwell, coach at the University of Southern California. He was aided in the sprinting book by Ralph Metcalfe, U. S. Olympic sprinter in 1932 and 1936 and now coach at Xavier College in New Orleans. The runners shown in the Ciné-Sport on sprinting are Metcalfe, Frank Wykoff and Charlie Parsons. The pole vaulters giving the demonstrations are Ken Dills and Loring Day, both of U.S.C.

FUNDAMENTALS OF PHYSICAL EXAMINATION. By George G. Deaver, M.D. Pp. 299. Illustrated—photographs and drawings. Philadelphia: W. B. Saunders Co. \$2.75.

DR. DEAVER is New York University's answer to Yale's Billy Phelps. He never misses a football game, plays a mean game of tennis and the boys call him "Butch." He is also one of the country's foremost authorities on athletic injuries.

(Concluded on page 40)

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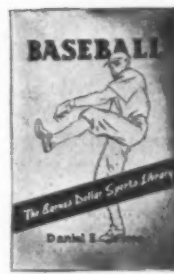
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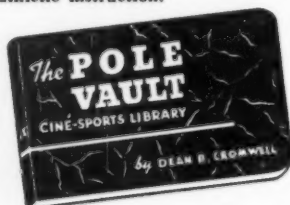
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New Books

(Continued from page 39)

At the University's department of physical education, the Doctor gives a course on physical examination and directs a first aid clinic for the department's wounded. Ever since he dragged the first skeleton out of his classroom closet almost ten years ago, he has been threatening to produce a complete textbook on physical examination. Not that he needed one to give the course, for he is one of the best extemporaneous lecturers in the business. But the students were continually asking for something more comprehensive than the outline text he was using. This is probably the first time in history a college professor was ever solicited to write a book.

The Doctor finally got around to it this year. In *Fundamentals of Physical Examination*, physical educators, students, and public health and school nurses will find a complete manual that will aid them (1) in recognizing the early symptoms and signs of abnormal functioning of the body; and (2) in understanding the technics and medical nomenclature of the physician.

The author leads the reader right into the method of conducting an examination. He takes the various parts of the body individually and tells, in a clear and interesting manner, exactly how and with what instruments each part should be examined. Such training is invaluable for a physical educator. Deaver-trained men are now doing excellent jobs in the high schools, community centers and settlement houses in and around New York City.

BIBLIOGRAPHY OF RECREATIONAL ACTIVITIES. Compiled by C. O. Jackson. Pp. 15.

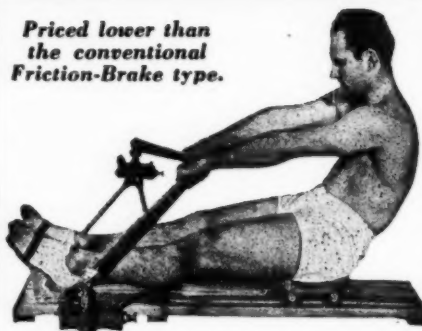
YOU don't have to invest as much as a three-cent stamp to obtain this precious 15-page bibliography of 30 different types of recreational activities. Anybody interested in this invaluable compilation may secure a free copy by sending a postal card to the Curriculum Library, 203 University High School, Urbana, Ill.

Mr. Jackson, who is an assistant professor in the University of Illinois' school of physical education, belongs to that vast legion of men who give unstintingly of their time and effort for no purpose other than the advancement of the profession. His bibliography must have taken an enormous amount of research. In many cases the author read and evaluated the references himself. Where this was not possible, he utilized reliable book reviews and recommendations from competent persons. With each book title, he gives the name of the author, the publisher, the number of pages and the price.

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Riflery

(Continued from page 24)

group of high school boys and girls.

This course includes the following subjects: (1) History of fire arms. (2) Nomenclature. (3) Organization. (4) Sights and sighting. (5) Care of the rifle. (6) The things that make for accuracy. (7) Safety and control in a junior club. (8) Ballistics and testing. (9) Range construction. (10) Competitions.

At Upper Darby no one man has sole charge of the club. Our season extends from September to June and we can hardly expect one teacher to give up every afternoon from 3:00 until 5:30 on the rifle range. Hence, we normally have five men who devote one afternoon a week to the rifle club. The club marksmen have a special incentive to spur them on. Every winter the best shots are chosen to represent the school in interscholastic competition.

During this season, one of the instructors acts as coach and spends three or four afternoons a week on the range with the team. Upper Darby is a member of the southeastern Pennsylvania interscholastic league and also competes against teams from all over the United States. The matches we fire with distant teams are conducted by mail. We send them marked targets for the match and receive similar targets in return.

In addition to the matches we arrange personally, we also compete in the matches conducted by the National Rifle Association during the fall, winter and spring months. The N.R.A. classifies each team according to ability. If a team improves its score, it automatically moves up to the next class. This type of competition makes it possible for schools to compete against others in their own class. It also gives the boys something to work for. They are constantly striving to lift the team into the highest classification.

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Strains, Bruises

Badminton Doubles

(Continued from page 22)

low full reach of the arm and racket, care must be taken to adjust the angle of flight accordingly, in order to avoid smashing into the net. Remember that when stroking near the shoulder level it will be necessary to drive rather than smash. In driving, keep far enough away from the bird to get the flick necessary for a fast return.

It is important at all times to observe your partner's court position and to plan the return accordingly if he is out of position. It would not be wise, for example, to drop from the backcourt at a time your partner is caught in the frontcourt. A common error in doubles is the failure to make sufficient use of the high clear. This weapon is just as effective in doubles as in singles. It gives you (or your partner) time to regain court position and is ordinarily a safe return, provided you don't clear short. Clear exceptionally high (if you have the necessary control) when you need time for recovery. A further advantage lies in the fact that the high clear is easy to mistime since the stroker must wait.

Generalship

The partners can assist one another considerably by calling "out" or "in" (as the case may be) on close plays at the boundary. It is usually easier for the partner removed from the play to see whether the bird is going to fall outside or inside than it is for the player who is hustling into position to make the play.

Keep your opponents moving; this is the only way you can force them into a weak court position. Plan your returns, where possible, to get the bird below the net level before the opponent can reach it. Attack at every opportunity, smashing and driving down in order to keep control of the situation. This forces your opponents to hit up into your more offensive overhead strokes, paving the way for the final kill.

Too frequently players try for the kill too soon, often sacrificing court position to do so. When in doubt, play safe. Don't be too anxious. Play for an opening, even if it takes a rather prolonged volley. Make the kill when you're sure. And remember, a kill shot is seldom possible from the backcourt.

The importance of deception can hardly be overemphasized. Due to the nature of the game and the peculiar flight of the bird, badminton lends itself well to this form of tactic. The effectiveness of deceptive

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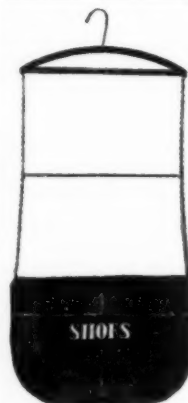
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play lies in the fact that the game is fast. Throwing the opponent off balance slightly, or delaying his start for an instant by making it impossible for him to anticipate the play, means precious moments lost. To this end, feint the direction of flight and the flight itself, as in faking a smash for an overhead drop, a drive for a drop from lower levels.

Occasionally, a few shots directed just over the net and near the center line will draw both partners to the net and pave the way for a kill placement to the backcourt. Study the game for difficult angles of flight, remembering that for every position of the opponent there is one placement (or possibly two) which will give him more trouble than any other.

Where several placements have been directed to one player, a sudden shift of the attack to the "cold" player will frequently find him unable to cope with the speed of the rally.

As mentioned earlier, the back left-hand corner is the most vulnerable spot on the court.

Girls' Play Day

(Continued from page 29)

ened to the rope and hoisted up on the pole. The color of the team with the highest number of points is hoisted first and flies on top. The others follow in the order of the team's standing.

The spirit of the play day should be "play for play's sake," and any awards should be by-products of the events and activities. If material awards are to be presented at the close of the day to the winning team, they should not be of intrinsic value—a banner, a plaque to schools, ribbons or badges to individuals, are entirely sufficient.

Play days have always been considered the exclusive adjuncts of the girls' athletic program, but there is no reason why boys cannot band together for such affairs as well. Recently there has been some successful experimentation with play days for mixed groups. Each school invited sends an equal number of boys and girls. The boys, however, play their games in another part of the field.

After the activities, a light meal is served in the school cafeteria. (It may be necessary to charge each player a small sum for this meal.) Then, from 6:00 to 9:00 P. M. the boys and girls may dance in the school gymnasium.



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The National Scholastic Tennis Tournament is strictly intramural and is designed to encourage the playing of tennis on the part of the student body as a whole.

Each school has complete control over its own tournaments, and may hold them any time before the end of the term.

A medal, suitably inscribed, will be presented to the winners of both the boy and girl tournament in each school. Free draw charts will be furnished to every school holding a tournament.

When applying for entry to the tournament, specify whether there will be a tournament for boys only, girls only, or a boys' and a girls' tournament. Schools are advised to register at once, as admission is restricted to 2500.

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Name Position

School

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Tennis Firsts

(Continued from page 16)

foot around to a position perpendicular to the net. The right foot should be about a foot and a half behind the left.

On the count of one, a rock is made to the front foot; on two, the weight shifts to the back foot as the ball is thrown up and the swing started; on three, the weight returns to the front foot and the ball is struck. The wrist is used more in the service perhaps than in any other stroke. The ball should be contacted at a point as high as the player can comfortably reach, which usually is about an arm's distance above the head. The player should toss the ball enough above this spot to allow him to complete his backswing and the forward swing before impact. He should be able to place seven out of ten first services into court. The standard slice service with the finish across the body is all some of the first ten nationally ranked players ever use.

The volley

The volley is a more advanced technique and should be taught only after the player has mastered the more fundamental strokes. In volleying, the faults to avoid are too much back swing and too much follow through. There usually is enough speed on the ball to make a rebound from a tightly held racket all that is necessary for a winner. The best way to advance in making this shot is with the racket out in front with its face perpendicular to the ground. A short, six-inch punching stroke just as the ball is met will usually provide all the speed that is necessary.

The only way to learn how to smash effectively is through practice. It is a delicately timed shot and constant practice is the only way to perfect it. The shot requires a full free swing in much the same manner as the service.

The beginner should be encouraged to use all of the standard strokes. The ornamental shots, such as the half volley, the chop, slice, drop shot, and lob volley, should not be taught until the others have been thoroughly mastered.

Tennis practice in many schools consists of inter-squad match play. Hardly any effort at all is made to work out one stroke at a time. And yet the only way to safely develop a sound game is to concentrate on one or two strokes at a time. The player should practice at least four or five times a week. Competitive practice is all right, of course, but not too much of it.

Coaching School Directory

BOSTON COLLEGE—Boston, Mass. June 26-July 1. Arthur Sampson, director.

COLORADO STATE COLLEGE—Fort Collins, Colo. Aug. 14-18. H. W. Hughes, director.

CORNELL UNIVERSITY—Ithaca, N. Y. June 26-July 1. George K. James, director.

DAYTONA BEACH—Daytona Beach, Fla. Aug. 21-26. G. R. Trogdon, director. See advertisement on page 33.

DUKE UNIVERSITY—Durham, N. C. July 21-29. Wallace Wade, director.

INDIANA BASKETBALL SCHOOL—Logansport, Ind. Aug. 14-18. Cliff Wells, director.

INDIANA UNIVERSITY—Bloomington, Ind. July 31-Aug. 4. Z. G. Clevenger, director.

JOHNSTOWN COACHING SCHOOL—Johnstown, Pa. July 24-29. Albert Rubis, director.

KANSAS COACHING SCHOOL—Topeka, Kan. Aug. 21-26. E. A. Thomas, director.

LEROY N. MILLS MEMORIAL KICKING SCHOOL—Mamaroneck, N. Y. June 26-28. Ed Storey, director. (For players only.)

LONG ISLAND UNIVERSITY—Brooklyn, New York City (N. Y.). Aug. 21-28. Clair F. Bee, director. See advertisement on page 37.

MONTANA STATE UNIVERSITY—Missoula, Mont. July 5-19. Douglas A. Fessenden, director.

PENN STATE COLLEGE—State College Pa. Main Session, July 3-Aug. 11; Inter-Session, June 13-30; Post-Session, Aug. 14-Sept. 1. See advertisement on page 33.

TEXAS H. S. FOOTBALL COACHES ASSN.—Houston, Tex. Aug. 7-12. W. B. Chapman, director.

UNIVERSITY OF COLORADO—Boulder, Colo. June 16-July 22. Dean Harold Benjamin, director.

UNIVERSITY OF ILLINOIS—Urbana, Ill. Dr. S. C. Staley, director.

UNIVERSITY OF KENTUCKY—Lexington, Ky. Aug. 7-12. M. E. Potter, director.

UNIVERSITY OF NEBRASKA—Lincoln, Neb.*

UNIVERSITY OF NORTH CAROLINA—Chapel Hill, N. C. Aug. 21-Sept. 2. R. A. Fetzer, director.

UNIVERSITY OF WISCONSIN—Madison, Wis. G. S. Lowman, director.*

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National Federation Annual Meeting

SIXTY-SEVEN delegates from twenty-six states assembled at the Cleveland Athletic Club, Ohio, on Feb. 27 for the annual meeting of the National Council of the National Federation of State High School Athletic Associations. The meeting was devoted primarily to a comprehensive review of athletic insurance and a discussion of the educational objectives of interscholastic athletics.

F. R. Wegner, secretary of the New York public high school athletic association, covered the national aspects of athletic protection in a special report at the morning session. A digest of his talk follows:

Athletic protection plans or insurance plans have been operating for six years, Wisconsin putting their plan into effect in 1932 and New York following the next year. Thirteen states have since followed suit in setting up one plan or another.

I am rather pessimistic however regarding the immediate possibility of establishing an athletic protection plan on a national basis. The costs of medical care in New York State alone vary as much as 200 percent and 300 percent according to the particular area where the treatment is given. If we compare the payments made in other states for the same type of injuries as in New York, these differences would be even greater.

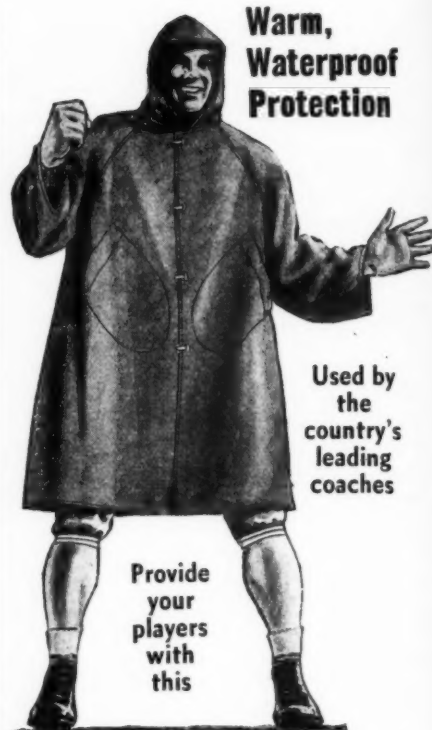
On the other hand, I do not believe that this pessimism should interfere with the continued study of our problems, because I believe that with further information we can set up a protection plan on a national basis and spread the risks a great deal more adequately. More important however than a national protection plan are the significant facts which the operation of the plans reveal in making interscholastic competition safer and increasingly intelligent.

I believe therefore that we should now set up procedures which will become standardized throughout the United States so that tenable and complete statistics and studies will become available.

In eight states 39,904 boys received the assurance that if they were injured their doctors' expenses would be largely financed. Of this number, 2,322 boys were actually injured. These figures indicate, then, that one boy in every seventeen playing football has been injured badly enough to require medical or dental care at the average expense of \$12.50 per boy.

We should be concerned, when we look at this matter from a national point of view, with three phases of this safety program: First, in the physical examination preceding participation in the game; secondly, in the circumstances surrounding the accidents; and, thirdly, in the determination of safety factors which the experience of these accidents would assist.

It is important to determine what factors in the physical make-up of a boy should be considered in validating his participation in any particular sport. Our experience would say that only the official school doctor should



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have the final power to O.K. a boy for competition, though I realize this is not the practice in all states.

It is extremely important that our blanks reporting accidents become completely standardized. Happily, they are nearly so at the present time. Yet, there are some important areas untouched. We find that the facsimile of the physician's bill on the blank facilitates our getting the necessary information. I believe that we should all demand the X-ray, or at least the official report of the X-ray laboratory.

The rule for the re-examination of a boy seriously injured before allowing him to participate again in a game should become completely standardized. We should simplify our blanks so as to get only pertinent information.

When all this has been done, the third step in co-ordinating our efforts through a central clearing house becomes relatively easy, but is still the most important. It calls for a compilation of statistics for each sport at the end of the playing season, and to mail them to one single office. The nature of these facts can best be determined by the men who have worked with the plans for several years. I believe the time is ripe to extend our services over a broader schedule of injuries and possibly make some modification in our present schedules. For instance: New York has paid claims this year for sprains. Out of 654 accidents in football, 204 sprains were reported and we paid \$1,780 for these injuries alone. We also included punctures and open wounds. These occur on our playing fields—they require medical attention—they should be a part of our schedules.

State	Boys Covered	Paid Injuries	Accidents per 1000	Total Amt. Pd.	Average per boy
Minnesota	3,821	470	80	\$6,074.25	\$12.37
Oregon	3,800	270	71		
Wisconsin	14,568	604	41.5	11,683.55	12.59
Kansas	6,495	322	49	3,491.35	10.81
New England	1,123	43	38		
Pennsylvania	1,689	110	65	1,305.70	11.87
New York	6,980	450*	64	8,062.10	13.96
Montana	1,428	53	37	861.50	16.25
	39,904	2,322	55	\$31,478.45	\$12.22

*This figure does not include sprains.

Athletic objectives

Wegner's report was followed by a panel discussion on the objectives and outcomes of the interscholastic athletic program, in which the following men participated: P. A. Jones, Sharon, Pa., chairman; A. L. Millsom, John Marshall High School, Cleveland, Ohio; Edmund Wicht, Harrisburg, Pa.; Dr. Hiram A. Jones, Albany, N. Y.; Floyd A. Rowe, Cleveland.

Dr. Jones of Albany was first called upon. After explaining in some detail the new method of administering interscholastic athletics in New York, he set up the following items as their ideals for the contribution of the interscholastic program to the welfare of the participants.

1. Safety: It is a fundamental necessity for the interscholastic program to eliminate hazards as far as possible and to protect the health and physical welfare of the participants.

2. Instruction: Efficient and skillful instruction is as essential to satisfactory achievement in this line as in any other high school subject.

3. Facilities: It is the ambition of the

(Concluded on page 48)

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OTHER LISTINGS AND SIGNATURE FORM ON PAGE 48

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Developer and Tester

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HERE IT IS

The control device that you have seen on the sport sheet and movie shorts at the **Yankee training camp**. A practical and positive aid to develop pitching control in High School and College boys, **Methodically yet interestingly**.

This Control device was developed and Patented by a baseball player and athletic coach with long experience and will prove a **definite and economical** aid to all coaches. It is already in use by **Colgate University**.

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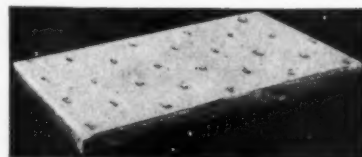
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For tumbling, boxing, wrestling, and as buffers around basketball courts.

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| KAHNFAST SATINS
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<input type="checkbox"/> Booklet on sanitation solutions | UNITED FRUIT CO.
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NAME _____ POSITION _____
 (Principal, coach, athletic director, physical director)
 SCHOOL _____ ENROLLMENT _____
 CITY _____ STATE _____

No coupon honored unless position is stated

Annual Meeting

(Continued from page 47)

New York administration to see that each school is provided with adequate facilities and that the use of these facilities be approximately equally divided between boys and girls.

4. Social Objectives: The program should be made to contribute to good citizenship and the spirit of cooperation and other qualities of character which enable men and women to live in friendly relationships with their neighbors.

5. Mental Development: With proper administration of this program, the study of the fundamentals as well as the technique of the games, is perhaps as well adapted to a program of mental development as many other subjects in the curriculum.

6. Cultural Objectives: A proper administration will look even beyond social and intellectual achievements to a fine attitude of understanding and appreciation of past and present achievements.

Mr. Wicht proceeded to show that after a long and realistic experience in the actual administration of a state athletic association program, he entertained grave doubts as to whether or not these idealistic outcomes were really achieved. He spoke of the intense rivalry developed not only between teams but between communities which frequently resulted in sharp antagonism leading almost to violence and rioting.

This viewpoint was supported by Chairman Jones who, while acknowledging the potential outcomes enumerated by Dr. Jones, made the point that the demands of institutional and community prestige, as well as the necessity of self financing, often made the achievement of those athletic aims too difficult if not impossible.

At the close of the meeting, the delegates passed a resolution requesting professional baseball scouts to refrain from approaching and signing contracts with high school students before the boys have completed their courses.

No more marking lines after rain
ALLEN'S SUPER-LINE

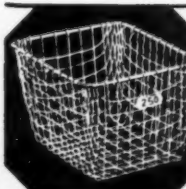
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\$15 per court will save \$100
 worth of labor

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SOUNDMASTER. Most life-like reproduction. Use anywhere — Classroom, auditorium, gym. Ample volume for crowds of 5,000 indoors, 1/4 mile range outdoors. Also plays records. Guaranteed. Used by schools everywhere.
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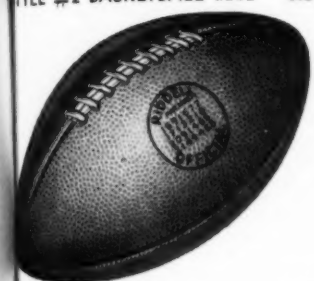
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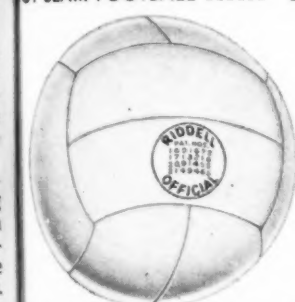
RIDDELL



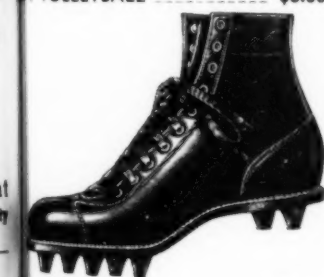
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 STYLE #1 BASKETBALL 8.00
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STYLE #1 FOOTBALL \$7.50
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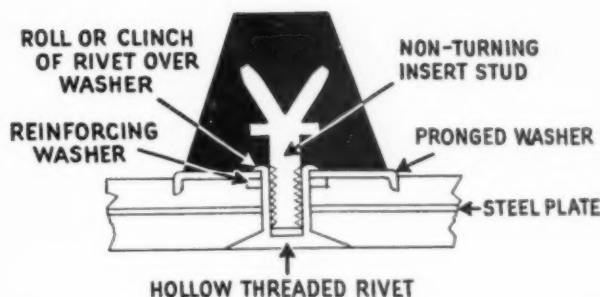
STYLE V VOLLEYBALL \$6.00



STYLE O \$6.00
 STYLE OX 6.00



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1939 IMPORTANT 1939 CLEAT CHANGE

The Rules Committee have made it mandatory that cleats be $\frac{1}{2}$ inch on the tread end and that they be conical in shape. The Rules Committee also have recommended that the cleats be of soft rubber and that they be "male" in type, that is the bolt in the cleat instead of projecting from the shoe. Our No. 1 Cleat since 1922 has been conical in shape, has been made of pliable rubber and has been $\frac{1}{2}$ inch on the end.

In 1922 we applied for a patent to cover our construction on "female" cleats. In 1923 we applied for a patent covering "male" cleats. This construction as far as the sole of the shoe is concerned, we have used for the past twelve years in our Track shoes. We have always felt that this was a sounder construction than the "female" type of anchorage which we have been using in our Football shoes. In short we have felt that our track construction was sounder mechanically than our football construction.

We have wanted to change to this type of construction for a number of years, but since we were not having trouble with Riddell shoes when Riddell cleats were used on them, we could not see our way clear to go through the trouble of making the change. Now since the Rules Committee have recommended this change, we welcome it as a step forward in improving our Football shoes.

1939 CLEAT PRICES 1939

MALE No. 1 or 2 (Med.) per set of 14 30c

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STYLE 89 SOFT TOE GAME SHOE \$10.00



STYLE H \$9.25



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STYLE P \$8.00
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STYLE 77 \$7.00
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Minor wounds are every-day occurrences during the athletic season, and prompt care is an important step in preventing infection. Even slight wounds may become infected when proper antiseptic treatment is neglected.

Mercurochrome, H. W. & D., is non-irritating and provides bactericidal and bacteriostatic action in wounds. Injuries are reported promptly when Mercurochrome is used because treatment is not painful.

Be prepared with Mercurochrome for the first aid care of all minor wounds and abrasions during this season when athletic activities are at their height. In more serious cases a doctor should be called.



This seal denotes acceptance of the 2% aqueous solution of Mercurochrome by the Council on Pharmacy and Chemistry of the American Medical Association.

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